



# CRIMPING BOOKLET

**MARCH 2020**



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### NEW PRODUCTS or FITTING SOLUTIONS INTRODUCED

Hose type	Remarks
ASTRO/3 DN 19	Change of ferrule to M00321-12 (STD 1)
ROCKMASTER/1SC DN 63 & 76	Introduction in the chart new DN 63 & 76, STD1 (Ferrules M03400)
ROCKMASTER/12	ALT1 solution: SP+M05400 ferrules DN 19 to 51
	ALT2 solution: MF+M03500 ferrules DN 10 to 51
GOLDENISO/21 XTRAFLEX DN 31, 38, 51	STD2 solution: DN 31 becomes SP+M05400-20
	ALT1 solution: DN 31, 38, 51 with OPK fittings
	ALT2 solution: DN 31 with MF+M03500-20
GOLDENISO/28 XTRAFLEX DN 10 to 51	STD2 solution: OPK fittings DN 10 to 31 (DN 38 & 51 with SP are now ALT1)
	ALT1 solution: SP+M05400 ferrules
	ALT2 solution: MF+M03500 ferrules
GOLDENISO/42 XTRAFLEX DN 51	New reference DN 51 introduced:
	STD1 with IS+M02700-32
	STD2 with SP-GX + M05500-32GX
GOLDENISO/42 XTRAFLEX DN 6	New reference introduced, STD1 (MF+M00120 ferrule)
GOLDENISO/38 LONGLIFE DN 6 to 12	New references introduced, STD1 (MF+M00120 ferrules)
DIAMONDSPIR	XTRALOCK Phase out, substitution IP (DN 19, 25, 31) & IS (DN 38, 51)
REFRIMASTER PLUS DN 22	New references introduced STD1 (FrigoClic+C00750-16)
SHIELDMASTER/21	New line introduced
SHIELDMASTER/28	New line introduced
SHIELDMASTER/35	New line introduced
SHIELDMASTER/42	New line introduced
CRYOFLEX/21	New line introduced
CRYOFLEX/35	New line introduced
CRYOFLEX/42	New line introduced
GOLDENISO/14 PILOT	New line introduced
HERCULES/HT	New line introduced
ANACONDA	New line introduced
DIAMONDSPIR/62	New line introduced
FOREMASTER/21	New line introduced
FOREMASTER/28	New line introduced
FOREMASTER/35	New line introduced
FOREMASTER/42	New line introduced
ROCKMASTER/2 PLUS SUPER AW	New line introduced
SPIRTEX	New line introduced
SPIRTEX/HT	New line introduced
SYNERGY	New line introduced
INFINITY	New line introduced
HYDROROPE	New line introduced
JACKMASTER/70	New line introduced
DIAMONDSPIR/17	New line introduced
XTRAFLOW/HTEX	New line introduced

Hose type	Remarks
SAFEMASTER/2SN	New line introduced
SAFEMASTER/2SC	New line introduced
TWINPOWER/PLUS DN 16	New size added
GOLDENISO/45 LONGLIFE DN 38	New size added

#### PHASE OUT FROM CRIMPING CHART & PRODUCT RANGE

Hose type	Remarks
SHIELDMASTER/2000	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/4000	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/5000	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/6000	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/17WS	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/2 PLUS MINE	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/5000 MINE	Phase out: substituted by the new ShieldMaster line
SHIELDMASTER/6000 MINE	Phase out: substituted by the new ShieldMaster line
HYDROPLAST & HYDROTWIN	Phase out: substituted by RockMaster/1SC & 2SC, TP7
GOLDENISO/14	Phase out: substituted by GoldenISO/14 Pilot
ROCKMASTER/2 PLUS	Phase out, substituted by RockMaster/2 Plus SAW
TRACTOR/1SN	Phase out, exception DN 6 to 12
TRACTOR/2SN	Phase out, exception DN 6 to 12
TRACTOR/1SC	Phase out substituted by RockMaster/1SC
TRACTOR/2SC	Phase out substituted by RockMaster/2SC
SPIRTEX/K	Phase out: substituted by Spirtex & Spirtex/HT
JACKMASTER	Phase out: substituted by JackMaster/70
NOZONE/2K	Phase out: substituted by ForeMaster, Infinity
ETERNITY/2	Out of Booklet (Infinity is proposed in substitution)
PILOT	Out of Booklet (substituted by GoldenISO/14 Pilot)
GOLDENISO/35 Longlife	Out of Booklet (substituted by GoldenISO/38 LL)

# How to Select an Appropriate Crimping Solution

In this revision of the Manuli Hydraulics Crimping Booklet you will find one or more fitting solution provided for each hose type and individual reference in the Manuli range. Manuli Hydraulics offers a wide range of fitting solutions to allow it to meet the needs of a complex, global market.

In this chapter, you will find guidelines on how to select the correct fitting solutions for your applications. Should you require additional support, contact your Manuli Hydraulics Sales Engineer who will provide expert advice and information. Also, for special applications support you can contact our Technical Marketing Team.

## Definitions:

<p>STANDARD 1</p>	<p>Corresponds to the general purpose MF2000 (two piece fittings) solutions:</p> <ul style="list-style-type: none"> <li>✓ Multifit insert, available with No-Skive style ferrules for wire and textile braided hoses (easy assembling) and Skive style ferrules for wire braided and wire spiral light duty hoses</li> <li>✓ Double-Skive Interlock Plus insert and ferrules for heavy duty spiral hoses, preferred by OEMs, for the most severe applications</li> </ul>
<p>STANDARD 2</p>	<p>A solution designed according to the North American market preferences, based on a No-Skive ferrule design, available with one-piece (pre-crimped ferrule) and two piece (traditional) design all over the applicable hose range:</p> <ul style="list-style-type: none"> <li>✓ One-piece OPF fittings (for small bore hoses) and OPK fittings (medium and large bore hoses)</li> <li>✓ Two-piece SpiralFit, for medium and large bore hoses, that can fit the no-skive applications in North America and in the rest of the world.</li> </ul>
<p>ALTERNATIVES</p>	<p>Alternative fitting solutions to the previous STANDARDS, such as:</p> <ol style="list-style-type: none"> <li>1. Skive style ferrules (Multifit insert) for wire braided hoses, that can offer increased robustness and are preferred by OEMs</li> <li>2. Interlock solutions on light duty spiral hose requested for longer service life or alternative to safety restraints</li> <li>3. Non-Interlock or simplified solutions for heavy duty hoses, as preferred in after market</li> <li>4. Other innovative simplified/compact solutions coming from new market inputs</li> </ol>

Always select STD 1 or STD 2 where possible. The alternative fitting solutions type 3 and 4 must be selected for less demanding applications only (basic pressure rating, no relevant pressure peaks, absence of extreme temperatures, no flexing conditions, no relevant vibrations, sufficient hose size to keep an appropriate low fluid velocity).

## Guidelines for assemblers:

The wide range of different fitting solutions for each hose line or single hose reference is intended to meet different market needs, in terms of performance (fatigue resistance and life duration), assembling process style (skive/double skive or no-skive), market segment of reference (original equipment, aftermarket/maintenance, retail, field repair, etc.) and geographical areas where different local factors require users to adopt different styles of components and assembling.

## STANDARD 1

This is the most common fitting solution of the Manuli Hydraulics range and it is based on the concept of a two piece MF2000 fitting.

Wire braided hoses are proposed with no-skive ferrules associated with the Multifit insert, a universal insert style used for textile reinforced and wire braided hoses. This solution is easy to assemble because it does not require any skiving operation and the visibility of the hose-to-fitting insertion process is very clear thanks to the two piece architecture. In addition the crimp is flat on the ferrule, inventory control is easy and minimal if compared to the one piece fitting style (as a few ferrules lines cover the whole range of hoses with the same universal inserts). This is a common solution throughout Europe but is also well-received globally. In terms of performance, this fitting solution meets and exceeds the basic requirements of international norms; it is therefore appropriate for any basic hydraulic application without severe or out-of-standard stresses. It is also widely used in aftermarket when and where definite and long life expectancy requirements are not a major issue.

Light duty wire spiral hoses are proposed with skive ferrules associated with the Multifit universal insert, this solution is easy to assemble, robust and uses the same inventory of inserts as the wire braided hoses. In terms of performance this fitting solution meets and exceeds the international specifications requirements. It is primarily used in aftermarket and OEM supplies.

Heavy duty wire spiral hoses are proposed with double skive Interlock Plus fittings. These are very robust and reliable, designed for long service life in severe hydraulic applications. This solution is preferred by OEMs and generally selected for the most demanding applications, but advised and commonly used also at distribution market level. In fact, the double skive operation required for assembling is not difficult, and can be easily implemented with dedicated tooling, and carried out by normal qualified personnel.

In terms of performance, the Interlock Plus fitting solution offers a very high fatigue resistance, exceeding the norms requirements (1 million or more impulse cycles). It is highly recommended for demanding applications, particularly those which subject the hose assembly to vibrations, high temperatures and flexing movements, or which require high durability (i.e.: equipment working 24 hours/day).

The Standard 1 fitting solution is normally advised for all the general market needs, at distribution level, retail, field repair and maintenance activities, also for OEM standard applications.

## STANDARD 2

A solution generally preferred by the North American market, usually comprising of a one-piece fitting and/or a no-skive assembly style. This type of solution is globally recognised as a simple, mistake-proof method of optimising the assembling operation both in the factory and in the field.

The major advantage of one piece fittings (OPF & OPK fittings) is that the assembling process is mistake proof as the operator has to select only one reference rather than two. However, the inventory needed is higher than for the two piece fitting style. It is also important that the fitting insertion depth is carefully measured and checked before proceeding with the assembling process.

In the North American market, this standard of fitting is commonly used and represents the majority of solutions on the distribution market. This solution is approved according to international norms criteria, and can be proposed for all standard hydraulic applications at the distribution level, for field repair and maintenance activities. Small and middle sized OEMs requiring approvals according to international norms can be served as well.

The heavy-duty medium and large bore high-performance hoses are presented with a no-skive two piece fitting solution from the Spiralfit range. This type of fitting, used worldwide, presents a long insert with high sealing property and no-skive robust ferrules, designed for wire spiral high pressure hoses. This solution is the answer for the no skive need of the North American market, but also finds interest in many other regions worldwide. The Spiralfit fitting is also the solution for large bore wire braided and spiral hoses up to 4".

Spiralfit fitting solutions can be used for all the standard hydraulic applications, including agriculture, industry, construction equipment, mining, etc., mainly for the distribution market, but also for retail and field repair as well. For OEMs applications Spiralfit can be proposed when basic specification requirements have to be guaranteed and working conditions are not extreme. On the contrary, for heavy duty wire spiral hoses, the STD 1 Interlock Plus fitting solution gives unparalleled performance and durability. Interlock Plus remains a competitive advantage to meet the challenges of the most demanding applications, customers and end users.

Further no-skive alternative fitting solutions are sometimes available for some sizes or product lines, in order to satisfy the most demanding needs in terms of price and robustness.

## ALTERNATIVES

There are also important alternatives to this standard that must be considered.

1. For wire braided hoses a skive ferrule is often preferred to the no-skive solution. The skive alternative solution for wire braided hoses offers increased robustness, in particular for fatigue resistance and leak proof performance in the case of severe applications. This alternative is suggested when the main hydraulic stresses (pressure and temperature in particular) are constantly close to the maximum performance values. In addition, pressure peaks, high vibrations, high fluid velocity, continuous and wide thermal excursions, flexing movements of the assembly, severe routing with tight bending behind the fittings, etc. can increase the need for this more robust solution. It is widely used for pressure lines on various hydraulic machinery (heavy duty excavators, telescopic booms, injection moulding machines, etc.), and is recommended for assemblies mounted on pumps and actuator outlets. OEMs prefer the skive alternative solution for wire braided hose if the supply is dedicated to original equipment applications.

Although the increased fatigue resistance of the skive fitting solution for wire braided hoses compared to the no-skive solution has not been clearly quantified, from extensive field and laboratory experience it is estimated that the durability of the assembly increases by as much as 30-50%. As such this is often preferred, and sometimes officially requested, by OEMs from their direct suppliers. The current trend towards compact and efficient Hydraulics increases the need for a more reliable solution for use in modern, compact, technological and high performance machines.

2. Light duty wire spiral hose lines also offer alternative Interlock architecture crimping solutions, for increased robustness and longer service life or alternative to safety restraint systems. These solutions are in favour of safety and reliability, offer a high performance profile, to be selected for OEM applications or when is necessary higher robustness than standard.

### \* Important note on Alternative crimping solutions

Whilst every crimping solution listed in this document fully complies with all relevant international norms and performance standards, it should be noted that the following two Alternative solution types (3 & 4) are generally considered to be less robust than the two Standard solutions (STD 1 and STD 2) offered. This in no way implies any deficiency with these specific Alternative solutions, but care should be taken to ensure that they are fully validated for more demanding applications. If in doubt, the more robust solutions should be selected where possible.

Please also note that the inclusion of this statement is for advisory purposes only and does not represent any downgrading of the solutions concerned. Customers already using these solutions do not need to revalidate them.

Contact the Manuli Hydraulics Technical Helpdesk for assistance if necessary.

3. For heavy duty wire spiral hoses, the non-Interlock solution is sometimes a preferred alternative for easier assembling and cost effectiveness. It is commonly used in aftermarket or field repair activities. Additionally, the light duty wire spiral hose lines offer alternative crimping solutions, no-skive style for aftermarket needs, designed for easy assembling and field repair with minimum performance targets. These solutions should be selected for the less demanding applications only, such as basic pressure rating, no relevant pressure peaks, absence of extreme temperatures, no flexing conditions, no relevant vibrations, sufficient hose size to keep an appropriate low fluid velocity, etc.

The following lines and positions in the hydraulic circuits should be avoided:

- Boom hoses
  - Swing motor hoses
  - Hydrostatic transmission hoses
  - Pumps outlets
  - The road side port of double acting cylinder
  - Any similar application which is in doubt
4. Innovative simplified solutions have been designed and validated for dedicated applications, thus their extension to other applications can involve theoretical risks. It is recommended that Manuli Hydraulics' customer assistance is requested to check the application before their usage.

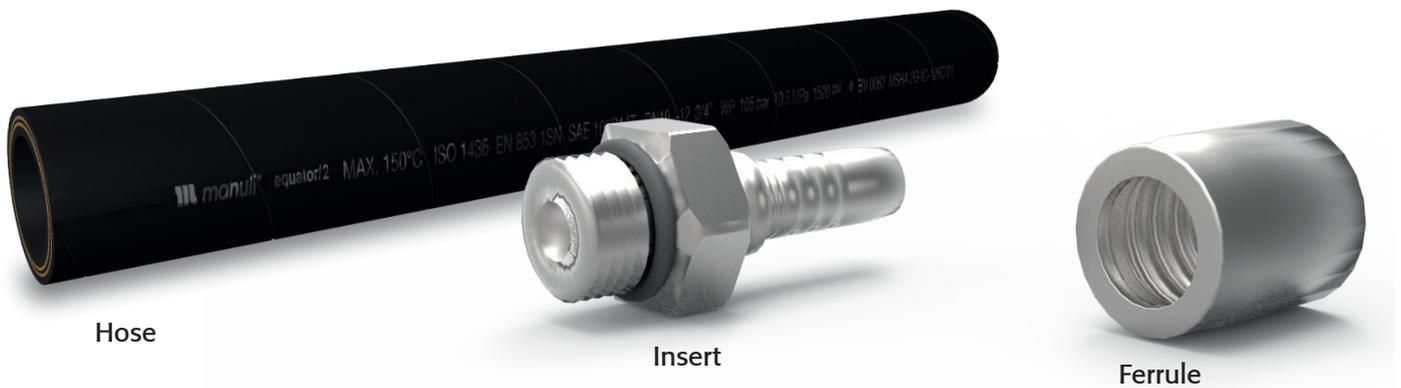
# HYDRAULIC HOSE ASSEMBLY INSTRUCTIONS

## 1 - COMPONENTS SELECTION

Select the hose, ferrules and inserts required for the assembly

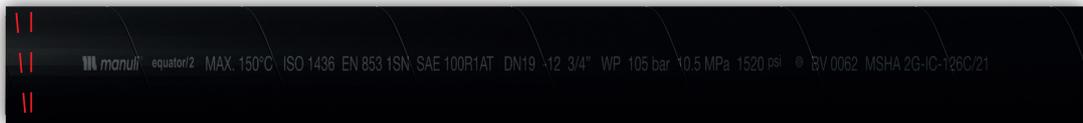


FOR THE MOST UP TO DATE INFORMATION AND PARTS REFER TO THE LATEST RELEASE OF THE MANULI FLUID CONNECTORS CATALOGUE



## 2 - HOSE CUTTING

Cut the hose squarely (cut angle must be less than 3°) using an appropriate blade to minimise heat damage to the rubber

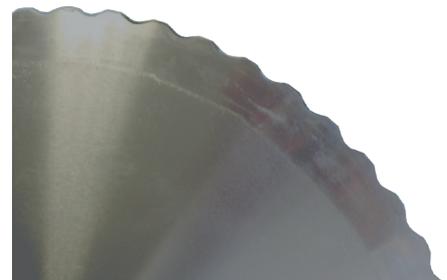


### CUTTING DISCS

#### SCALLOPED BLADE TYPE

Suitable for cutting all hose types, with preference towards small and medium sizes.

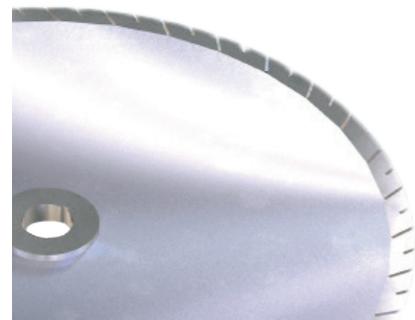
Available in 254, 300, 400 and 520 mm sizes



#### SLOTTED BLADE TYPE

Ideal for cutting all hose types and sizes. Will have the longest service life and produces the highest quality cut.

Available in 400 and 520 mm sizes

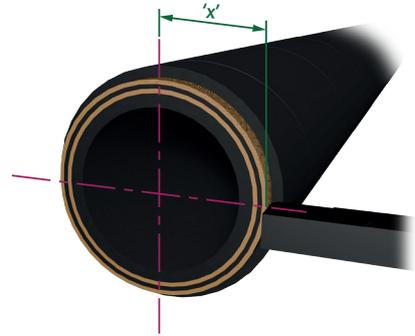


### 3 - SKIVING OPERATIONS

If skiving is required set up the skiving machine so that the front edge of the knife is set to the correct length to within  $\pm 0.5\text{mm}$  ( $\pm 0.02''$ )



REFER TO THE LATEST RELEASE OF MANULI CRIMPING DATA FOR SKIVE LENGTHS



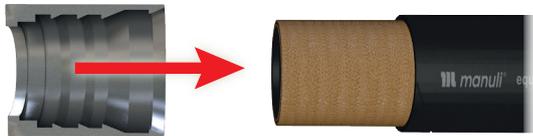
Radius 'x' should be set to remove the maximum amount of the cover material without damaging or displacing the reinforcement

### 4a - FITTINGS MOUNTING - 2-PIECE FITTINGS



In the case of MF2000 two-piece fittings the below mounting method is used:

1

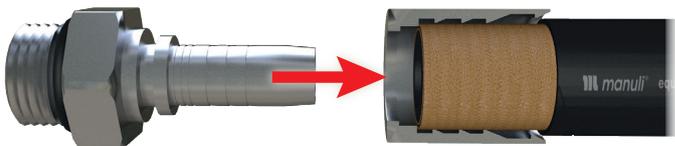


Place the ferrule over the prepared end of the hose



Ensure the hose is pushed in until it hits the internal stop on the ferrule

2

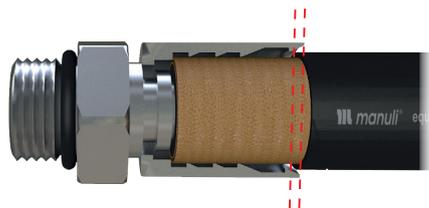


Push the insert fully into the hose until it contacts the ferrule



Large bore and Interlock fittings may require the use of a pushing machine to ensure proper insertion into the hose

3



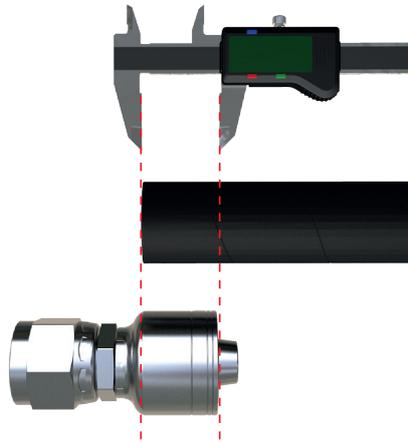
When correctly mounted the end of the ferrule should extend beyond any skiving

4b - FITTINGS MOUNTING - 1-PIECE FITTINGS

In the case of MF3000 one-piece fittings the below mounting method is used:



1



Measure the distance from the open end of the fitting to the shoulder using calipers, and then mark this distance from the end of the hose to indicate the correct insertion depth

2



Push the fitting onto the end of the hose until the open end meets the mark on the hose



Large bore fittings may require the use of a pushing machine to ensure proper insertion into the hose

5 - DIE-SET SELECTION

As an integrated supplier of hoses, fittings and assembly tools, Manuli recommends that you use only official Manuli crimping machines when producing your assemblies.

When setting up the crimping machine the die-set selected should be the die-set closest to, and smaller than the listed Crimping Diameter - 0.4mm



THE -0.4mm MODIFICATION FACTOR IS INTENDED TO ALLOW FOR METAL REBOUND AFTER CRIMPING AND FOR ANY BULGING OF THE FERRULE WHICH MAY OCCUR WHEN CRIMPING CLOSE TO THE DIE-SET'S MINIMUM CLOSURE DIAMETER



ALWAYS USE THE MOST RECENT CRIMPING DATA PROVIDED BY MANULI HYDRAULICS

Crimp. Diam.		DIE N.
mm	inch	
15,9	0,626	15
16,9	0,665	15
19,2	0,756	18
22,9	0,902	21

Example 1

To achieve a finished crimped diameter of 23.5mm the die-set would be selected as follows:

$$23.5\text{mm} - 0.4\text{mm} = 23.1\text{mm}$$

Die-Set 21 required

Example 2

To achieve a finished crimped diameter of 24.1mm the die-set would be selected as follows:

$$24.1\text{mm} - 0.4\text{mm} = 23.7\text{mm}$$

Die-Set 21 required



NOTE THAT IN EXAMPLE 2 THE DIE-SET REQUIRED IS DIE-SET 21 AND NOT DIE-SET 24. THIS IS BECAUSE DIE-SET 24 DOES NOT ALLOW FOR THE -0.4mm MODIFICATION FACTOR

For your convenience, and to minimise the risk of error, we have included the die-set number for each fitting solution in our crimping tables.

Crimp. Diam.		DIE N.
mm	inch	
15,9	0,626	15
16,9	0,665	15
19,2	0,756	18
22,9	0,902	21

## 6 - PRELIMINARY SETUP OF MANULI CRIMPING MACHINES

Manuli crimping machines have two distinct types of crimping control, the standard vernier dial gauge type and the SCS (Safe Crimp System) automated type.

### Setting the Initial Crimping Diameter on Vernier Dial Gauge Machines

On machines with the vernier dial gauge the formula for setting the crimp diameter value is:

$$(Nominal Crimp Diameter - Die-Set Value - Modification Factor) \times 100$$

The above formula should produce a crimping diameter close to the required value.

#### Example:

To achieve a final crimping diameter of 23.5mm using Die-Set 21:

$$(23.5 - 21 - 0.4) \times 100 = 210$$

So the vernier dial gauge should be set to a value of **210**.



**The initial setting value obtained from the above formula is intended as a starting point for correct setup. Using the above formula does not guarantee an accurate final crimping diameter and the validation and modification process (see Step 7) should always be followed to ensure that the final crimp diameter is accurate.**

### Setting the Initial Crimping Diameter on SCS Machines

On machines with SCS control simply enter the nominal crimping diameter (for example 23.5mm) and the automated system will calculate the correct settings.



**The initial setting value calculated by the SCS is only intended as a starting point for correct setup. The validation and modification process (see Step 7) should always be followed to ensure that the final crimp diameter is accurate.**

Once the initial crimping operation has been carried out, measure the actual average crimped diameter of the ferrule and calculate the difference between this value and the nominal value required (as explained in the following steps).

Enter this calculated value as the offset in the SCS system.

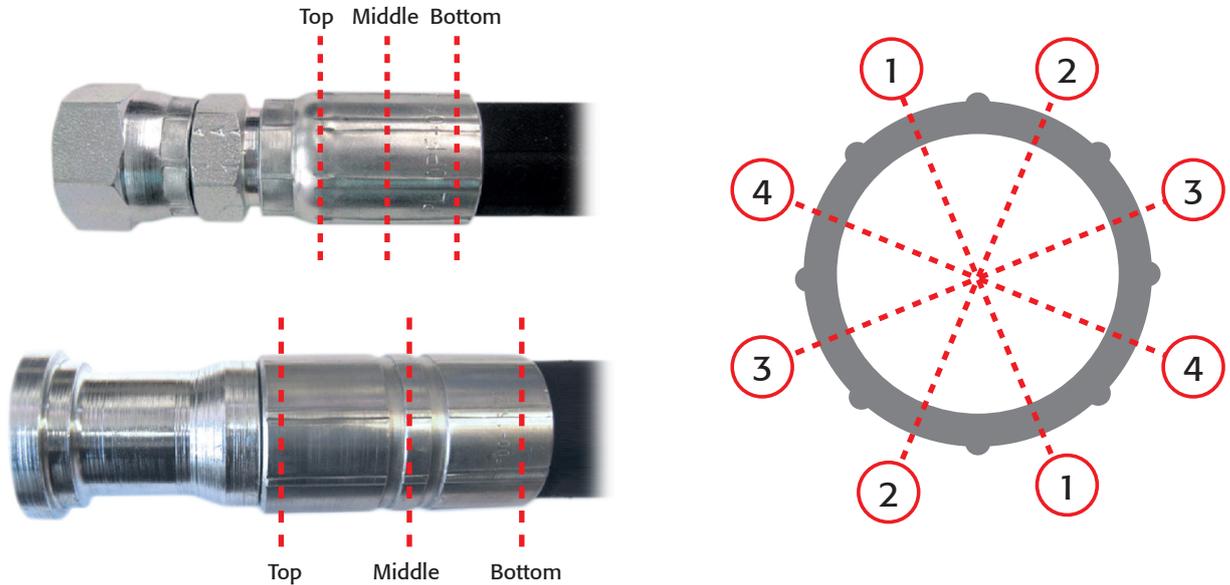


**FOR FURTHER INFORMATION ON THE CORRECT USE AND SETUP OF THE SCS PLEASE REFER TO THE SPECIFIC PROCEDURE**

## 7 - VALIDATION AND MODIFICATION OF CRIMP SETTINGS

After the initial crimping operation the crimped ferrule should be inspected according to the following procedure:

1. Take 4 measurements across the crimped ferrule diameter at 45° to one another as shown using vernier calipers or a micrometer gauge. The measurements should be taken from the middle section of the ferrule's crimped length and from across the die landing areas NOT from across the raised pips (see below).



2. Calculate the average crimping diameter using the four measurements taken.
3. Verify that the calculated average crimped diameter is within the acceptable tolerances of [+0mm / -0.2mm] of the required crimping diameter.
4. If the calculated value is outside of the acceptable limits calculate the difference between this value and the required value. If this difference is greater than 0.2mm mark the ferrule with an "X" and adjust the crimping machine settings by this value (either up or down depending on if the actual crimp is under- or over-sized).

### Oversized Ferrule Diameter (ie: Insufficient Crimping)

If the crimped ferrule diameter is too large, REDUCE the crimping machine setting by the calculated error value and recrimp the same ferrule.

#### Example

If the measured value is 23.8mm rather than 23.5mm then the error is +0.3mm. To correct for this error the crimping machine setting should be reduced by 0.3mm.

In the case of a Manuli vernier dial gauge machine, the reduction would be  $0.3 \times 100 = 30$ .

### Undersized Ferrule Diameter (ie: Excessive Crimping)

If the crimped ferrule diameter is too small, INCREASE the crimping machine setting by the calculated error value, crimp the other end fitting of the assembly and then restart the validation procedure at Step 1.

5. Calculate the Crimp Ovality as the difference between the highest and lowest values that were measured in Step 1.
6. If the Crimp Ovality exceeds 0.2mm, mark an "X" on the ferrule and inspect the crimping machine die-head, springs and dies for damage or wear, replacing any defective parts.
7. Take 4 diameter measurements (as in Step 1) from both the top and bottom sections of the crimped ferrule and calculate the average diameter of each position.

8. Calculate the difference between these two values. The result is the Crimp Taper value.

Verify that the Crimp Taper value is within the following limits:

- For hose sizes up to and including DN16 (5/8"), taper should not exceed 0.3mm
  - For hose sizes from DN19 (3/4") and up to and including DN 76 (3"), taper should not exceed 0.6mm
9. If the calculated Crimp Taper value exceeds these limits mark an "X" on the ferrule and inspect the crimping machine die-head, springs and dies for damage or wear, replacing any defective parts.

The crimping machine should now be correctly setup and calibrated ready for production.



**Scrap any assembly which has an "X" on the ferrule.**

**After completing the above setup process the crimping machine setting should not be altered and double-striking of the ferrule is not allowed.**

## 8 - CRIMPING OPERATIONS

In the case of MF2000 two-piece fittings and MF3000 OPF & OPK type one-piece fittings, position the entire length of the ferrule inside the dies in order to obtain a completely flat crimp.



**Double crimping of ferrules covering partial lengths in two or more strikes is not allowed**

1. Crimp the next hose assembly end using the same crimp setting that was determined during the setup process.
2. Take 4 measurements across the crimped ferrule diameter at 45° to one another as shown using vernier calipers or a micrometer gauge. The measurements should be taken from the middle section of the ferrule's crimped length and from across the die landing areas NOT from across the raised pips.
3. Calculate the crimped diameter as the average of these 4 measurements.
4. Verify that the actual crimped diameter is within the specified limits of [+0mm / -0.2mm] of the required crimping diameter as specified in the relevant crimping data charts.
5. If the measured crimping diameter is outside of the allowable limits it indicates that the crimping machine is "out of control" and must be subjected to maintenance or repair as required.



**Repeat the above process for all hose assemblies of the same type.**

**It is not permitted to crimp Manuli hose assemblies to a crimping diameter outside of the defined range (ie: Crimping chart value +0/-0.2) of those specified in the latest version of the Manuli Crimping Data.**

## TRACTOR/1SN

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02004A06*	6	- 4	1/4"	Multifit	M03400-04	No Skive	17,9	0,705	15
H02004008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	18,7	0,736	18
H02004010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H02004012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02004A06*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H02004008*	8	- 5	5/16"		OPF-05	No Skive	18,4	0,724	18
H02004010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H02004012*	12	- 8	1/2"		OPF-08	No Skive	22,8	0,898	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## TRACTOR/1SN

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H02004A06*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,3	0,642	15
H02004008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,4	0,685	15
H02004010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,6	0,772	18
H02004012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,5	0,886	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

### CRIMP VERSION: Alternative 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02004A06*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,9	0,665	15
H02004008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,3	0,720	15
H02004010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,7	0,815	18
H02004012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

GLOBAL STANDARD 2

## TRACTOR/2SN

**CRIMP VERSION: Standard 1**

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01027006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,6	0,732	18
H01027008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,7	0,776	18
H01027010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	21,4	0,843	21
H01027012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	24,3	0,957	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**CRIMP VERSION: Standard 2**

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01027006*	6	- 4	1/4"		OPF-04	No Skive	18,8	0,740	18
H01027008*	8	- 5	5/16"		OPF-05	No Skive	19,7	0,776	18
H01027010*	10	- 6	3/8"		OPF-06	No Skive	21,5	0,846	21
H01027012*	12	- 8	1/2"		OPF-08	No Skive	24,1	0,949	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## TRACTOR/2SN

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01027006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01027008*	8	- 5	5/16"	Multifit	M00910-05	External Skive	23,0	0,91	21,0	0,827	18
H01027010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01027012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01027010*	10	- 6	3/8"		OPK-06	No Skive	23,5	0,925	21
H01027012*	12	- 8	1/2"		OPK-08	No Skive	27,1	1,067	24

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## LYTE-FLEX

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01084006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,9	0,665	15
H01084008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,6	0,732	18
H01084010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,7	0,815	18
H01084012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21
H01084016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,3	1,075	24
H01084019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,2	1,228	30
H01084025*	25	- 16	1"	Multifit	M03400-16	No Skive	38,7	1,524	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01084006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01084008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01084010*	10	- 6	3/8"		OPF-06	No Skive	20,8	0,819	18
H01084012*	12	- 8	1/2"		OPF-08	No Skive	23,5	0,925	21
H01084016*	16	- 10	5/8"		OPF-10	No Skive	27,0	1,063	24
H01084019*	19	- 12	3/4"		OPF-12	No Skive	30,8	1,213	30
H01084025*	25	- 16	1"		OPF-16	No Skive	38,4	1,512	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## LYTE-FLEX

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01084006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,6	0,654	15
H01084008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01084010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,4	0,803	18
H01084012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01084016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,1	1,106	27
H01084019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,6	1,244	30
H01084025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,3	1,508	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01084006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,1	0,713	15
H01084008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H01084010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,7	0,815	18
H01084012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# HARVESTER/17

## CRIMP VERSION: Standard 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01056006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H01056008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H01056A10*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18
H01056A12*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,1	0,909	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01056006*	6	- 4	1/4"		OPF-04	No Skive	16,9	0,665	15
H01056008*	8	- 5	5/16"		OPF-05	No Skive	17,9	0,705	15
H01056A10*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18
H01056A12*	12	- 8	1/2"		OPF-08	No Skive	22,8	0,898	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## HARVESTER/17

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01056006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	15,8	0,622	15
H01056008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	16,5	0,650	15
H01056A10*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,8	0,780	18
H01056A12*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,6	0,890	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# COVER

## CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H05002005*	5	- 4	3/16"	Multifit	M00310-03	No Skive	14,6	0,575	12
H05002006*	6	- 5	1/4"	Multifit	M00310-04	No Skive	16,7	0,657	15
H05002008*	8	- 6	5/16"	Multifit	M00310-05	No Skive	17,5	0,689	15
H05002010*	10	- 8	13/32"	Multifit	M00310-06	No Skive	20,7	0,815	20
H05002012*	12	- 10	1/2"	Multifit	M00310-08	No Skive	24,2	0,953	21
H05002016*	16	- 12	5/8"	Multifit	M00310-10	No Skive	27,7	1,091	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H05002005*	5	- 4	3/16"		OPF-03	No Skive	14,7	0,579	12
H05002006*	6	- 5	1/4"		OPF-04	No Skive	19,7	0,776	18
H05002008*	8	- 6	5/16"		OPF-05	No Skive	20,6	0,811	18
H05002010*	10	- 8	13/32"		OPF-06	No Skive	21,4	0,843	21
H05002012*	12	- 10	1/2"		OPF-08	No Skive	23,6	0,929	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# SPIRTEX

## CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H80002019*	19	- 12	3/4"	Multifit	M00321-12	No Skive	32,5	1,280	30
H80002025*	25	- 16	1"	Multifit	M00930-16	No Skive	42,2	1,661	39
H80002031*	31	- 20	1.1/4"	Multifit	M00920-20	No Skive	49,8	1,961	48
H80002038*	38	- 24	1.1/2"	Multifit	M00910-24	No Skive	58,0	2,283	57
H80002051*	51	- 32	2"	Multifit	M00910-32	No Skive	72,0	2,835	70
H80002063*	63	- 40	2.1/2"	Multifit	M03400-40	No Skive	80,7	3,177	76
H80002076*	76	- 48	3"	Multifit	M03400-48	No Skive	95,2	3,748	90
H80002089*	89	- 56	3.1/2"	Multifit	M03400-56	No Skive	113,5	4,469	112
H80002102*	102	- 64	4"	Multifit	M03400-64	No Skive	125,0	4,921	122

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

GLOBAL STANDARD 10

# MULTITEX

## CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H09067005*	5	- 3	3/16"	Multifit	M00820-03	No Skive	12,1	0,476	10
H09067006*	6	- 4	1/4"	Multifit	M00830-04	No Skive	15,0	0,591	12
H09067008*	8	- 5	5/16"	Multifit	M00830-05	No Skive	16,0	0,630	15
H09067010*	10	- 6	3/8"	Multifit	M00820-06	No Skive	18,4	0,724	18
H09067012*	12	- 8	1/2"	Multifit	M00820-08	No Skive	22,6	0,890	21
H09073016*	16	- 10	5/8"	Multifit	M00820-10	No Skive	26,1	1,028	24
H09073019*	19	- 12	3/4"	Multifit	M00820-12	No Skive	29,7	1,169	27
H09073025*	25	- 16	1"	Multifit	M00820-16	No Skive	36,3	1,429	33

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## ASTRO/2

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H09045006*	6	- 4	1/4"	Multifit	M00830-04	No Skive	15,9	0,626	15
H09045008*	8	- 5	5/16"	Multifit	M00830-05	No Skive	16,9	0,665	15
H09045010*	10	- 6	3/8"	Multifit	M00820-06	No Skive	19,2	0,756	18
H09045012*	12	- 8	1/2"	Multifit	M00820-08	No Skive	22,9	0,902	21
H09045016*	16	- 10	5/8"	Multifit	M00820-10	No Skive	26,9	1,059	24
H09045019*	19	- 12	3/4"	Multifit	M00820-12	No Skive	30,4	1,197	30
H09045025*	25	- 16	1"	Multifit	M00820-16	No Skive	38,1	1,500	36
H09045032*	31	- 20	1.1/4"	Multifit	M00820-20	No Skive	45,7	1,799	45

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ASTRO/3

### CRIMP VERSION: Standard 1

Release number: 5.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H09046006*	6	- 4	1/4"	Multifit	M00310-04	No Skive	16,1	0,634	15
H09046008*	8	- 5	5/16"	Multifit	M00310-05	No Skive	17,2	0,677	15
H09046010*	10	- 6	3/8"	Multifit	M00310-06	No Skive	20,4	0,803	20
H09046012*	12	- 8	1/2"	Multifit	M00310-08	No Skive	23,2	0,913	21
H09046016*	16	- 10	5/8"	Multifit	M00310-10	No Skive	27,0	1,063	24
H09046019*	19	- 12	3/4"	Multifit	M00321-12	No Skive	31,6	1,244	30
H09046025*	25	- 16	1"	Multifit	M00310-16	No Skive	38,3	1,508	36
H09046032*	31	- 20	1.1/4"	Multifit	M00310-20	No Skive	44,2	1,740	42
H09046040*	38	- 24	1.1/2"	Multifit	M00910-24	No Skive	58,4	2,299	57
H09046051*	51	- 32	2"	Multifit	M00910-32	No Skive	71,5	2,815	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/14 PILOT

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01160005*	5	- 3	3/16"	Minifit	M02400-03	No Skive	14,7	0,579	12
H01160006*	6	- 4	1/4"	Minifit	M02400-04	No Skive	14,6	0,575	12
H01160008*	8	- 5	5/16"	Minifit	M02400-05	No Skive	16,7	0,657	15
H01160010*	10	- 6	3/8"	Minifit	M02400-06	No Skive	19,0	0,748	18
H01160012*	12	- 8	1/2"	Minifit	M02400-08	No Skive	20,9	0,823	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01160005*	5	- 3	3/16"	Multifit	M03300-03	No Skive	15,1	0,594	12
H01160006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,4	0,646	15
H01160008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H01160010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	19,8	0,780	18
H01160012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	22,4	0,882	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/21 ANTIWEAR

### CRIMP VERSION: Standard 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01125A05*	5	- 3	3/16"	Multifit	M03300-03	No Skive	15,4	0,606	15
H01125006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H01125008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H01125010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18
H01125012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,1	0,909	21
H01125016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,3	1,075	24
H01125019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,2	1,228	30
H01125025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,1	1,539	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01125A05*	5	- 3	3/16"		OPF-03	No Skive	15,4	0,606	15
H01125006*	6	- 4	1/4"		OPF-04	No Skive	16,9	0,665	15
H01125008*	8	- 5	5/16"		OPF-05	No Skive	17,9	0,705	15
H01125010*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18
H01125012*	12	- 8	1/2"		OPF-08	No Skive	22,8	0,898	21
H01125016*	16	- 10	5/8"		OPF-10	No Skive	27,0	1,063	24
H01125019*	19	- 12	3/4"		OPF-12	No Skive	30,8	1,213	30
H01125025*	25	- 16	1"		OPF-16	No Skive	38,7	1,524	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## GOLDENISO/21 ANTIWEAR

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01125006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	15,8	0,622	15
H01125008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	16,5	0,650	15
H01125010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,8	0,780	18
H01125012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,6	0,890	21
H01125016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,1	1,106	27
H01125019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,6	1,244	30
H01125025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01125010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,2	0,795	18
H01125012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,1	0,909	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

HI-GRADE ISOBARIC 16

## GOLDENISO/28 ANTIWEAR

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01126006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,9	0,665	15
H01126008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,6	0,732	18
H01126010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,7	0,815	18
H01126012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21
H01126016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	28,2	1,110	27
H01126019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	32,4	1,276	30

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01126006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01126008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01126010*	10	- 6	3/8"		OPF-06	No Skive	20,8	0,819	18
H01126012*	12	- 8	1/2"		OPF-08	No Skive	23,5	0,925	21
H01126016*	16	- 10	5/8"		OPF-10	No Skive	27,9	1,098	27
H01126019*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/28 ANTIWEAR

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01126006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,6	0,654	15
H01126008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01126010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,4	0,803	18
H01126012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01126016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,5	1,122	27
H01126019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	32,6	1,283	30

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01126006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,1	0,713	15
H01126008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H01126010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,7	0,815	18
H01126012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21
H01126016*	16	- 10	5/8"		OPK-10	No Skive	29,8	1,173	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

HI-GRADE ISOBARIC 18

## GOLDENISO/21 XTRAFLEX

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10093031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	0,0	0,00	48,0	1,89	48,4	1,906	48
H10093038*	38	- 24	1.1/2"	Interlock-Plus	M01500-24	Double Skive	25,0	0,98	73,0	2,87	56,0	2,205	54
H10093051*	51	- 32	2"	Interlock-Plus	M01500-32	Double Skive	31,0	1,22	86,0	3,39	73,3	2,886	72

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10093031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	52,5	2,067	51
H10093038*	38	- 24	1.1/2"	Spiralfit	M05400-24	No Skive	60,1	2,366	57
H10093051*	51	- 32	2"	Spiralfit	M05400-32	No Skive	74,6	2,937	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/21 XTRAFLEX

### CRIMP VERSION: Alternative 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
* H10093031*	31	- 20	1.1/4"		OPK-20	No Skive	50,8	2,000	48
* H10093038*	38	- 24	1.1/2"		OPK-24	No Skive	58,6	2,307	57
* H10093051*	51	- 32	2"		OPK-32	No Skive	72,7	2,862	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10093031*	31	- 20	1.1/4"	Multifit	M03500-20	No Skive	50,2	1,976	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

\* This is a simplified solution. Please refer to page viii for further information

## GOLDENISO/28 XTRAFLEX

**CRIMP VERSION: Standard 1**

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10095010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	0,0	0,00	26,0	1,02	21,8	0,858	21
H10095012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	0,0	0,00	28,0	1,10	25,1	0,988	24
H10095016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	0,0	0,00	33,0	1,30	28,6	1,126	27
H10095019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	0,0	0,00	32,0	1,26	33,0	1,299	30
H10095025*	25	- 16	1"	Multifit	M00930-16	External Skive	0,0	0,00	42,0	1,65	40,8	1,606	39
H10095031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	0,0	0,00	48,0	1,89	48,4	1,906	48
H10095038*	38	- 24	1.1/2"	Interlock-Plus	M01500-24	Double Skive	25,0	0,98	73,0	2,87	56,0	2,205	54
H10095051*	51	- 32	2"	Interlock-Plus	M01500-32	Double Skive	29,0	1,14	86,0	3,39	73,9	2,909	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**CRIMP VERSION: Standard 2**

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10095010*	10	- 6	3/8"		OPK-06	No Skive	23,4	0,921	21
H10095012*	12	- 8	1/2"		OPK-08	No Skive	27,0	1,063	24
H10095016*	16	- 10	5/8"		OPK-10	No Skive	29,9	1,177	27
H10095019*	19	- 12	3/4"		OPK-12	No Skive	34,6	1,362	33
H10095025*	25	- 16	1"		OPK-16	No Skive	42,2	1,661	39
H10095031*	31	- 20	1.1/4"		OPK-20	No Skive	50,8	2,000	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/28 XTRAFLEX

### CRIMP VERSION: Alternative 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10095019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,5	1,437	36
H10095025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,6	1,756	42
H10095031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	52,5	2,067	51
H10095038*	38	- 24	1.1/2"	Spiralfit	M05400-24	No Skive	59,4	2,339	57
H10095051*	51	- 32	2"	Spiralfit	M05400-32	No Skive	75,1	2,957	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10095010*	10	- 6	3/8"	Multifit	M03500-06	No Skive	23,5	0,925	21
H10095012*	12	- 8	1/2"	Multifit	M03500-08	No Skive	27,1	1,067	24
H10095016*	16	- 10	5/8"	Multifit	M03500-10	No Skive	30,1	1,185	27
H10095019*	19	- 12	3/4"	Multifit	M03500-12	No Skive	34,6	1,362	33
H10095025*	25	- 16	1"	Multifit	M03500-16	No Skive	42,0	1,654	39
H10095031*	31	- 20	1.1/4"	Multifit	M03500-20	No Skive	50,2	1,976	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

HI-GRADE ISOBARIC 22

## GOLDENISO/35 XTRAFLEX

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10096010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	0,0	0,00	26,0	1,02	21,8	0,858	21
H10096012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	0,0	0,00	28,0	1,10	25,1	0,988	24
H10096016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	0,0	0,00	33,0	1,30	28,6	1,126	27
H10096019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,0	1,339	33
H10096025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,1	1,618	39
H10096031*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	48,9	1,925	48
H10096038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,2	2,370	57
H10096051*	51	- 32	2"	Interlock-Plus	M01800-32	Double Skive	29,0	1,14	84,0	3,31	75,1	2,957	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10096010*	10	- 6	3/8"		OPK-06	No Skive	23,4	0,921	21
H10096012*	12	- 8	1/2"		OPK-08	No Skive	26,8	1,055	24
H10096016*	16	- 10	5/8"		OPK-10	No Skive	30,2	1,189	27
H10096019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,2	1,425	33
H10096025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	43,9	1,728	42
H10096031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	51,8	2,039	51
H10096038*	38	- 24	1.1/2"	Spiralfit	M05500-24	No Skive	65,2	2,567	62
H10096051*	51	- 32	2"	Spiralfit	M05500-32	No Skive	79,3	3,122	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/35 XTRAFLEX

### CRIMP VERSION: Alternative 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H10096019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,3	1,311	30
* H10096025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,0	1,614	39

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10096010*	10	- 6	3/8"	Multifit	M03500-06	No Skive	23,5	0,925	21
H10096012*	12	- 8	1/2"	Multifit	M03500-08	No Skive	27,1	1,067	24
H10096016*	16	- 10	5/8"	Multifit	M03500-10	No Skive	30,3	1,193	27
* H10096019*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33
* H10096025*	25	- 16	1"		OPK-16	No Skive	42,5	1,673	42
* H10096031*	31	- 20	1.1/4"		OPK-20	No Skive	51,0	2,008	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

\* This is a simplified solution. Please refer to page viii for further information

# GOLDENISO/42 XTRAFLEX

## CRIMP VERSION: Standard 1

Release number: 6.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10097006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	0,0	0,00	23,0	0,91	16,4	0,646	15
H10097010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	0,0	0,00	26,0	1,02	22,8	0,898	21
H10097012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	0,0	0,00	28,0	1,10	25,8	1,016	24
H10097016*	16	- 10	5/8"	Interlock-Plus	M01500-10	Double Skive	12,0	0,47	30,0	1,18	29,1	1,146	27
H10097019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,1	1,343	33
H10097025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,3	1,626	39
H10097031*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	52,7	2,075	51
H10097038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,6	2,386	57
H10097051*	51	- 32	2"	Interlock-Super	M02700-32	Double Skive	30,0	1,18	92,0	3,62	80,0	3,150	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**REMARK:**

DN51: this reference must be crimped with one of the following machines:

- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

using a special die set n°76 with length 135mm (code: ESA3540N135-76 ).

Please verify the pins codes when ordering this special die set according to machine model.

## CRIMP VERSION: Standard 2

Release number: 5.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10097012*	12	- 8	1/2"	Multifit	M03500-08	No Skive	27,6	1,087	27
H10097016*	16	- 10	5/8"	Spiralfit	M05400-10	No Skive	32,7	1,287	30
H10097019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,4	1,433	36
H10097025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,1	1,736	42
H10097031*	31	- 20	1.1/4"	Spiralfit	M05500-20	No Skive	57,6	2,268	57
H10097038*	38	- 24	1.1/2"	SpiralfitGX	M05500-24GX	No Skive	65,5	2,579	62
H10097051*	51	- 32	2"	SpiralfitGX	M05500-32GX	No Skive	83,0	3,268	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENISO/42 XTRAFLEX

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10097012*	12	- 8	1/2"		OPK-08	No Skive	27,5	1,083	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## GOLDENISO/38 LONGLIFE

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10098006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	0,0	0,00	23,0	0,91	16,7	0,657	15
H10098008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	0,0	0,00	23,0	0,91	17,8	0,701	15
H10098010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	0,0	0,00	23,0	0,91	20,4	0,803	18
H10098012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	0,0	0,00	26,0	1,02	23,6	0,929	21
H10098019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,1	1,343	33
H10098025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,3	1,626	39
H10098031*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	52,7	2,075	51

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## GOLDENISO/45 LONGLIFE

### CRIMP VERSION: Standard 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
	H10089006*	6	- 4				1/4"	Interlock-Plus	M01500-04	Double Skive	10,0	0,39	
H10089016*	16	- 10	5/8"	Interlock-Plus	M01500-10	Double Skive	12,0	0,47	30,0	1,18	29,8	1,173	27
H10089019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	35,2	1,386	33
H10089025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,9	1,650	39
H10089031*	31	- 20	1.1/4"	Interlock-Plus	M01800-20	Double Skive	22,0	0,87	70,0	2,76	56,0	2,205	54
H10089038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,8	2,394	57

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## SHIELDMASTER/21

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01154006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	15,8	0,622	15
H01154008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	16,5	0,650	15
H01154010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,8	0,780	18
H01154012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,6	0,890	21
H01154016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,1	1,106	27
H01154019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,6	1,244	30
H01154025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01154006*	6	- 4	1/4"		OPF-04	No Skive	16,9	0,665	15
H01154008*	8	- 5	5/16"		OPF-05	No Skive	17,9	0,705	15
H01154010*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18
H01154012*	12	- 8	1/2"		OPK-08	No Skive	26,4	1,039	24
H01154016*	16	- 10	5/8"		OPF-10	No Skive	27,0	1,063	24
H01154019*	19	- 12	3/4"		OPF-12	No Skive	30,8	1,213	30
H01154025*	25	- 16	1"		OPF-16	No Skive	38,7	1,524	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SHIELDMASTER/21

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01154006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H01154008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H01154010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18
H01154012*	12	- 8	1/2"	Multifit	M03450-08	No Skive	24,0	0,945	21
H01154016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,3	1,075	24
H01154019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,2	1,228	30
H01154025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,1	1,539	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SHIELDMASTER/28

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01155006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,6	0,654	15
H01155008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01155010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,4	0,803	18
H01155012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01155016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,5	1,122	27
H01155019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	32,6	1,283	30
H01155025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	40,8	1,606	39
H01155031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	48,4	1,906	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01155006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01155008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01155010*	10	- 6	3/8"		OPF-06	No Skive	20,8	0,819	18
H01155012*	12	- 8	1/2"		OPK-08	No Skive	26,2	1,031	24
H01155016*	16	- 10	5/8"		OPK-10	No Skive	29,8	1,173	27
H01155019*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33
H01155025*	25	- 16	1"		OPK-16	No Skive	41,8	1,646	39
H01155031*	31	- 20	1.1/4"		OPK-20	No Skive	50,8	2,000	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SHIELDMASTER/28

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01155006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,9	0,665	15
H01155008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,6	0,732	18
H01155010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,7	0,815	18
H01155012*	12	- 8	1/2"	Multifit	M03450-08	No Skive	24,4	0,961	24
H01155016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	28,2	1,110	27
H01155019*	19	- 12	3/4"	Multifit	M03500-12	No Skive	34,9	1,374	33
H01155025*	25	- 16	1"	Multifit	M03500-16	No Skive	41,6	1,638	39

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

# SHIELDMASTER/35

## CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10119006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	0,0	0,00	23,0	0,91	16,4	0,646	15
H10119008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	0,0	0,00	23,0	0,91	17,8	0,701	15
H10119010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	0,0	0,00	23,0	0,91	20,4	0,803	18
H10119012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	0,0	0,00	26,0	1,02	23,6	0,929	21
H10119016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	0,0	0,00	33,0	1,30	28,6	1,126	27
H10119019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,0	1,339	33
H10119025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,1	1,618	39
H10119031*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	48,9	1,925	48
H10119038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,2	2,370	57
H10119051*	51	- 32	2"	Interlock-Plus	M01800-32	Double Skive	29,0	1,14	84,0	3,31	75,1	2,957	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10119006*	6	- 4	1/4"		OPF-04	No Skive	17,9	0,705	15
H10119008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H10119010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H10119012*	12	- 8	1/2"		OPK-08	No Skive	26,2	1,031	24
H10119016*	16	- 10	5/8"		OPK-10	No Skive	30,2	1,189	27
H10119019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,2	1,425	33
H10119025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	43,9	1,728	42
H10119031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	51,8	2,039	51
H10119038*	38	- 24	1.1/2"	Spiralfit	M05500-24	No Skive	65,2	2,567	62
H10119051*	51	- 32	2"	Spiralfit	M05500-32	No Skive	79,3	3,122	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SHIELDMASTER/35

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10119006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,2	0,717	15
H10119008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H10119010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H10119012*	12	- 8	1/2"	Multifit	M03450-08	No Skive	24,5	0,965	24
H10119016*	16	- 10	5/8"	Multifit	M03500-10	No Skive	30,6	1,205	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# SHIELDMASTER/42

## CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10120006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	0,0	0,00	23,0	0,91	16,4	0,646	15
H10120010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	0,0	0,00	26,0	1,02	22,8	0,898	21
H10120012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	0,0	0,00	28,0	1,10	25,8	1,016	24
H10120019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,1	1,343	33
H10120025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,3	1,626	39
H10120031*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	52,7	2,075	51
H10120038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,6	2,386	57
H10120051*	51	- 32	2"	Interlock-Super	M02700-32	Double Skive	30,0	1,18	92,0	3,62	80,0	3,150	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**REMARK:**

DN51: this reference must be crimped with one of the following machines:  
 • MS400  
 • MS480  
 • MS800  
 • GOLDENCRIMP420  
 • GOLDENCRIMP450  
 using a special die set n°76 with length 135mm (code: ESA3540N135-76 ).  
 Please verify the pins codes when ordering this special die set according to machine model.

## CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10120006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H10120012*	12	- 8	1/2"		OPK-08	No Skive	27,5	1,083	27
H10120019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,4	1,433	36
H10120025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,1	1,736	42
H10120031*	31	- 20	1.1/4"	Spiralfit	M05500-20	No Skive	57,6	2,268	57
H10120038*	38	- 24	1.1/2"	SpiralfitGX	M05500-24GX	No Skive	65,5	2,579	62

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## SHIELDMASTER/42

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10120006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,2	0,717	15
H10120012*	12	- 8	1/2"	Multifit	M03500-08	No Skive	27,6	1,087	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## DIAMONDSPIR/14

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10104076*	76	- 48	3"	Interlock-Plus	M01500-48	Double Skive	33,0	1,30	102,0	4,02	97,0	3,819	95

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## DIAMONDSPIR/17

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10135076*	76	- 48	3"	Interlock-Plus	M01500-48	Double Skive	33,0	1,30	102,0	4,02	97,4	3,835	95
H10135089*	89	- 56	3.1/2"	Interlock-Super	M02610-56	Double Skive	77,0	3,03	196,0	7,72	127,5	5,020	122

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## DIAMONDSPIR/21

**CRIMP VERSION: Standard 1**

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10102063*	63	- 40	2.1/2"	Interlock-Plus	M01500-40	Double Skive	32,0	1,26	101,0	3,98	86,6	3,409	86
H10102076*	76	- 48	3"	Interlock-Plus	M01810-48	Double Skive	33,0	1,30	100,0	3,94	102,2	4,024	95

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## DIAMONDSPIR/35

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10103063*	63	- 40	2.1/2"	Interlock-Plus	M01810-40	Double Skive	32,0	1,26	101,0	3,98	90,5	3,563	86
H10103076*	76	- 48	3"	Interlock-Super	M02700-48	Double Skive	57,0	2,24	135,0	5,31	108,5	4,272	105

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

**REMARK:**

Crimp. Toll:  
 DN63: 0 /-0.2 mm (0 /-0.008 inch);  
 DN76: 0 /-0.3 mm (0 /-0.012 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10103076*	76	- 48	3"	Interlock-Super	M02800-48	Double Skive	54,0	2,13	132,0	5,20	108,5	4,272	105

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

**REMARK:**

Crimp. Toll:  
 DN76: 0 /-0.3 mm (0 /-0.012 inch)

It's recommended only with crimp machine MS1600 / MS2000.

HI-GRADE ISOBARIC 40

## MASTERTEX

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H09069006*	6	- 4	1/4"	Multifit	M00830-04	No Skive	15,0	0,591	12
H09069010*	10	- 6	3/8"	Multifit	M00820-06	No Skive	18,4	0,724	18
H09069012*	12	- 8	1/2"	Multifit	M00820-08	No Skive	22,6	0,890	21
H09069016*	16	- 10	5/8"	Multifit	M00820-10	No Skive	26,1	1,028	24

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 \text{ } / -0.2 \text{ mm} (0 \text{ } / -0.008 \text{ inch})$

## ROCKMASTER/1SC

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01108006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H01108008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H01108010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	19,7	0,776	18
H01108012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,2	0,913	21
H01108016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,2	1,071	24
H01108019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	30,7	1,209	30
H01108025*	25	- 16	1"	Multifit	M03400-16	No Skive	38,3	1,508	36
H01108031*	31	- 20	1.1/4"	Multifit	M03400-20	No Skive	47,5	1,870	45
H01108038*	38	- 24	1.1/2"	Multifit	M00820-24	No Skive	51,8	2,039	51
H01108051*	51	- 32	2"	Multifit	M00820-32	No Skive	64,6	2,543	62
H01108063*	63	- 40	2.1/2"	Multifit	M03400-40	No Skive	77,5	3,051	76
H01108076*	76	- 48	3"	Multifit	M03400-48	No Skive	94,3	3,713	90

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

### CRIMP VERSION: Standard 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01108006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	15,8	0,622	15
H01108008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	16,5	0,650	15
H01108010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,1	0,752	18
H01108012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,5	0,886	21
H01108016*	16	- 10	5/8"	Multifit	M00820-10	External Skive	29,0	1,14	24,4	0,961	24
H01108019*	19	- 12	3/4"	Multifit	M00820-12	External Skive	32,0	1,26	27,4	1,079	27
H01108025*	25	- 16	1"	Multifit	M00820-16	External Skive	38,0	1,50	36,0	1,417	33
H01108031*	31	- 20	1.1/4"	Multifit	M00820-20	External Skive	43,0	1,69	43,2	1,701	42

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## ROCKMASTER/2SC

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01030005*	5	- 3	3/16"	Multifit	M03300-03	No Skive	15,4	0,606	15
H01030006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	17,0	0,669	15
H01030008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,6	0,732	18
H01030010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,5	0,807	18
H01030012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21
H01030016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,4	1,079	27
H01030019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,1	1,224	30
H01030025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,4	1,551	39
H01030031*	31	- 20	1.1/4"	Multifit	M03400-20	No Skive	48,7	1,917	48
H01030038*	38	- 24	1.1/2"	Multifit	M03400-24	No Skive	56,2	2,213	54
H01030051*	51	- 32	2"	Multifit	M03400-32	No Skive	69,0	2,717	66
H01030063*	63	- 40	2.1/2"	Multifit	M03400-40	No Skive	80,0	3,150	76
H01030076*	76	- 48	3"	Multifit	M03400-48	No Skive	96,0	3,780	95

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01030005*	5	- 3	3/16"		OPF-03	No Skive	15,8	0,622	15
H01030006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01030008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01030010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H01030012*	12	- 8	1/2"		OPF-08	No Skive	23,5	0,925	21
H01030016*	16	- 10	5/8"		OPF-10	No Skive	26,8	1,055	24
H01030019*	19	- 12	3/4"		OPF-12	No Skive	30,7	1,209	30
H01030025*	25	- 16	1"		OPF-16	No Skive	38,7	1,524	36
H01030031*	31	- 20	1.1/4"		OPK-20	No Skive	50,4	1,984	48
H01030038*	38	- 24	1.1/2"		OPK-24	No Skive	57,8	2,276	57
H01030051*	51	- 32	2"		OPK-32	No Skive	71,3	2,807	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/2SC

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01030005*	5	- 3	3/16"	Multifit	M00120-03	External Skive	18,0	0,71	14,6	0,575	12
H01030006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,5	0,650	15
H01030008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01030010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,2	0,795	18
H01030012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01030016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	27,8	1,094	27
H01030019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,5	1,240	30
H01030025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36
H01030031*	31	- 20	1.1/4"	Multifit	M00110-20	External Skive	45,0	1,77	46,6	1,835	45
H01030038*	38	- 24	1.1/2"	Multifit	M00110-24	External Skive	59,0	2,32	52,9	2,083	51
H01030051*	51	- 32	2"	Multifit	M00110-32	External Skive	59,0	2,32	66,0	2,598	62

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

### CRIMP VERSION: Alternative 2

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01030005*	5	- 3	3/16"	Multifit	M03400-03	No Skive	16,3	0,642	15
H01030006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,2	0,717	15
H01030008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H01030010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01030012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/1SN

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01007006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	17,9	0,705	15
H01007008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	18,7	0,736	18
H01007010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01007012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21
H01007016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,0	1,063	24
H01007019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	30,9	1,217	30
H01007025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,2	1,543	36
H01007032*	31	- 20	1.1/4"	Multifit	M03400-20	No Skive	48,6	1,913	48
H01007040*	38	- 24	1.1/2"	Multifit	M03400-24	No Skive	57,0	2,244	54
H01007051*	51	- 32	2"	Multifit	M03400-32	No Skive	69,5	2,736	66
H01007060*	60	- 38	2.3/8"	Multifit	M03400-38	No Skive	76,1	2,996	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01007006*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H01007008*	8	- 5	5/16"		OPF-05	No Skive	18,4	0,724	18
H01007010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H01007012*	12	- 8	1/2"		OPF-08	No Skive	22,8	0,898	21
H01007019*	19	- 12	3/4"		OPF-12	No Skive	30,6	1,205	30
H01007025*	25	- 16	1"		OPF-16	No Skive	38,4	1,512	36
H01007032*	31	- 20	1.1/4"		OPK-20	No Skive	49,8	1,961	48
H01007040*	38	- 24	1.1/2"		OPK-24	No Skive	57,2	2,252	54
H01007051*	51	- 32	2"		OPK-32	No Skive	71,7	2,823	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/1SN

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
	H01007006*	6	- 4				1/4"	Multifit	M00120-04	External Skive	
H01007008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,4	0,685	15
H01007010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,6	0,772	18
H01007012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,5	0,886	21
H01007016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	27,3	1,075	24
H01007019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,3	1,232	30
H01007025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36
H01007032*	31	- 20	1.1/4"	Multifit	M00110-20	External Skive	42,0	1,65	47,5	1,870	45
H01007040*	38	- 24	1.1/2"	Multifit	M00110-24	External Skive	56,0	2,20	53,0	2,087	51
H01007051*	51	- 32	2"	Multifit	M00110-32	External Skive	56,0	2,20	66,0	2,598	62

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
	H01007006*	6	- 4				1/4"	Multifit	
H01007008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,3	0,720	15
H01007010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,7	0,815	18
H01007012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/2SN

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01038006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,6	0,732	18
H01038008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,7	0,776	18
H01038010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	21,4	0,843	21
H01038012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	24,3	0,957	21
H01038016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	28,1	1,106	27
H01038019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,9	1,256	30
H01038025*	25	- 16	1"	Multifit	M03400-16	No Skive	40,0	1,575	39
H01038032*	31	- 20	1.1/4"	Multifit	M03400-20	No Skive	50,7	1,996	48
H01038040*	38	- 24	1.1/2"	Multifit	M03400-24	No Skive	59,6	2,346	57
H01038051*	51	- 32	2"	Multifit	M03400-32	No Skive	72,5	2,854	72
H01038060*	60	- 38	2.3/8"	Multifit	M03400-38	No Skive	76,1	2,996	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01038006*	6	- 4	1/4"		OPF-04	No Skive	18,8	0,740	18
H01038008*	8	- 5	5/16"		OPF-05	No Skive	19,7	0,776	18
H01038010*	10	- 6	3/8"		OPK-06	No Skive	23,5	0,925	21
H01038012*	12	- 8	1/2"		OPK-08	No Skive	27,1	1,067	24
H01038016*	16	- 10	5/8"		OPK-10	No Skive	30,1	1,185	27
H01038019*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33
H01038025*	25	- 16	1"		OPK-16	No Skive	43,0	1,693	42
H01038032*	31	- 20	1.1/4"		OPK-20	No Skive	52,7	2,075	51
H01038040*	38	- 24	1.1/2"		OPK-24	No Skive	59,8	2,354	57
H01038051*	51	- 32	2"		OPK-32	No Skive	73,6	2,898	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/2SN

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01038006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01038008*	8	- 5	5/16"	Multifit	M00910-05	External Skive	23,0	0,91	21,0	0,827	18
H01038010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01038012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24
H01038016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	28,7	1,130	27
H01038019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,4	1,315	33
H01038025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H01038032*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	51,0	2,008	48
H01038040*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	58,0	2,28	58,1	2,287	57
H01038051*	51	- 32	2"	Multifit	M00910-32	External Skive	59,0	2,32	71,6	2,819	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
* H01038010*	10	- 6	3/8"		OPF-06	No Skive	21,5	0,846	21
* H01038012*	12	- 8	1/2"		OPF-08	No Skive	24,1	0,949	21
* H01038016*	16	- 10	5/8"		OPF-10	No Skive	27,6	1,087	27
* H01038019*	19	- 12	3/4"		OPF-12	No Skive	31,9	1,256	30
* H01038025*	25	- 16	1"		OPF-16	No Skive	39,7	1,563	39

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

\* This is a simplified solution. Please refer to page viii for further information

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## ROCKMASTER/2ST

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01035005*	5	- 3	3/16"	Multifit	M00910-03	External Skive	21,0	0,83	17,4	0,685	15
H01035006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01035008*	8	- 5	5/16"	Multifit	M00910-05	External Skive	23,0	0,91	21,0	0,827	18
H01035010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01035012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24
H01035016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	28,7	1,130	27
H01035019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,4	1,315	33
H01035025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H01035032*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	50,0	1,97	51,0	2,008	48
H01035040*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	60,0	2,36	58,1	2,287	57
H01035051*	51	- 32	2"	Multifit	M00910-32	External Skive	61,0	2,40	71,6	2,819	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/2 PLUS SUPER-AW

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01139006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	0,0	0,00	18,2	0,717	15
H01139010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01139012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,7	1,012	24
H01139016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	29,1	1,146	27
H01139019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,2	1,307	30
H01139025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,7	1,642	39
H01139031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	50,8	2,000	48
H01139038*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	60,0	2,36	58,7	2,311	57
H01139051*	51	- 32	2"	Multifit	M00910-32	External Skive	61,0	2,40	71,0	2,795	70
H01139076*	76	- 48	3"	Multifit	M03400-48	External Skive	61,0	2,40	95,0	3,740	90

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01139006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01139010*	10	- 6	3/8"		OPK-06	No Skive	23,8	0,937	21
H01139012*	12	- 8	1/2"		OPK-08	No Skive	27,4	1,079	27
H01139016*	16	- 10	5/8"		OPK-10	No Skive	30,3	1,193	27
H01139019*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33
H01139025*	25	- 16	1"		OPK-16	No Skive	42,9	1,689	42
H01139031*	31	- 20	1.1/4"		OPK-20	No Skive	52,9	2,083	51

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/4SH

### CRIMP VERSION: Standard 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10044016*	16	- 10	5/8"	Interlock-Plus	M01500-10	Double Skive	12,0	0,47	30,0	1,18	29,8	1,173	27
H10044019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,8	1,370	33
H10044025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,5	1,634	39
H10044032*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	49,5	1,949	48
H10044038*	38	- 24	1.1/2"	Interlock-Plus	M01500-24	Double Skive	25,0	0,98	73,0	2,87	56,4	2,220	54
H10044051*	51	- 32	2"	Interlock-Plus	M01500-32	Double Skive	29,0	1,14	86,0	3,39	73,5	2,894	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10044019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,7	1,445	36
H10044025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,5	1,752	42
H10044032*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	52,0	2,047	51
H10044038*	38	- 24	1.1/2"	Spiralfit	M05400-24	No Skive	59,7	2,350	57
H10044051*	51	- 32	2"	Spiralfit	M05400-32	No Skive	74,7	2,941	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/4SH

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
* H10044019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,6	1,323	33
* H10044025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,6	1,638	39
* H10044032*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	48,8	1,921	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

\* This is a simplified solution. Please refer to page viii for further information

## ROCKMASTER/4SP

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H10008006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	24,0	0,94	18,3	0,720	15
H10008010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,8	0,898	21
H10008012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,8	1,016	24
H10008016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	28,8	1,134	27
H10008019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,6	1,323	33
H10008025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H10008032*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	51,0	2,008	48
H10008038*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	60,0	2,36	59,5	2,343	57
H10008051*	51	- 32	2"	Multifit	M00910-32	External Skive	61,0	2,40	72,5	2,854	72

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10008019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,7	1,445	36
H10008025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,4	1,748	42
H10008032*	31	- 20	1.1/4"	Spiralfit	M05500-20	No Skive	57,2	2,252	54
H10008038*	38	- 24	1.1/2"	Spiralfit	M05500-24	No Skive	64,8	2,551	62
H10008051*	51	- 32	2"	Spiralfit	M05400-32	No Skive	75,8	2,984	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/4SP

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10008016*	16	- 10	5/8"	Interlock-Plus	M01500-10	Double Skive	12,0	0,47	30,0	1,18	29,0	1,142	27
H10008019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,8	1,370	33
H10008025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,5	1,634	39

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/12

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H10031010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,3	0,878	21
H10031012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,8	1,016	24
H10031016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	29,3	1,154	27
H10031019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,5	1,319	33
H10031025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H10031A32*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	49,5	1,949	48
H10031040*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	60,0	2,36	58,0	2,283	57
H10031051*	51	- 32	2"	Multifit	M00910-32	External Skive	61,0	2,40	71,0	2,795	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10031010*	10	- 6	3/8"		OPK-06	No Skive	24,3	0,957	21
H10031012*	12	- 8	1/2"		OPK-08	No Skive	27,5	1,083	27
H10031016*	16	- 10	5/8"		OPK-10	No Skive	31,0	1,220	30
H10031019*	19	- 12	3/4"		OPK-12	No Skive	34,8	1,370	33
H10031025*	25	- 16	1"		OPK-16	No Skive	42,8	1,685	42
H10031A32*	31	- 20	1.1/4"		OPK-20	No Skive	51,4	2,024	51
H10031040*	38	- 24	1.1/2"		OPK-24	No Skive	59,3	2,335	57
H10031051*	51	- 32	2"		OPK-32	No Skive	73,2	2,882	72

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## ROCKMASTER/12

### CRIMP VERSION: Alternative 1

Release number: 5.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10031019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,5	1,437	36
H10031025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,6	1,756	42
H10031A32*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	52,5	2,067	51
H10031040*	38	- 24	1.1/2"	Spiralfit	M05400-24	No Skive	60,8	2,394	57
H10031051*	51	- 32	2"	Spiralfit	M05400-32	No Skive	74,7	2,941	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10031010*	10	- 6	3/8"	Multifit	M03500-06	No Skive	24,0	0,945	21
H10031012*	12	- 8	1/2"	Multifit	M03500-08	No Skive	27,5	1,083	27
H10031016*	16	- 10	5/8"	Multifit	M03500-10	No Skive	31,0	1,220	30
H10031019*	19	- 12	3/4"	Multifit	M03500-12	No Skive	35,0	1,378	33
H10031025*	25	- 16	1"	Multifit	M03500-16	No Skive	42,6	1,677	42
H10031A32*	31	- 20	1.1/4"	Multifit	M03500-20	No Skive	50,5	1,988	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/13

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10035019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	35,8	1,409	33
H10035025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	42,4	1,669	42
H10035032*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	53,1	2,091	51
H10035040*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	61,0	2,402	57
H10035051*	51	- 32	2"	Interlock-Plus	M01800-32	Double Skive	29,0	1,14	84,0	3,31	75,8	2,984	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10035019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	37,3	1,469	36
H10035025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	45,1	1,776	42
H10035032*	31	- 20	1.1/4"	Spiralfit	M05500-20	No Skive	57,9	2,280	57
H10035040*	38	- 24	1.1/2"	Spiralfit	M05500-24	No Skive	65,8	2,591	62
H10035051*	51	- 32	2"	Spiralfit	M05500-32	No Skive	79,8	3,142	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## ROCKMASTER/15

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
	H10049019*	19	- 12				3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	
H10049025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,5	1,634	39
H10049A32*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	52,9	2,083	51
H10049040*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	61,0	2,402	57

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
	H10049019*	19	- 12				3/4"	Spiralfit	
H10049025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,5	1,752	42
H10049A32*	31	- 20	1.1/4"	Spiralfit	M05500-20	No Skive	57,6	2,268	57
H10049040*	38	- 24	1.1/2"	Spiralfit	M05500-24	No Skive	65,8	2,591	62

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## EQUATOR/1 (BLACK)

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01058006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,3	0,642	15
H01058008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,2	0,677	15
H01058010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,6	0,772	18
H01058012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,5	0,886	21
H01058016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	27,3	1,075	24
H01058019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,3	1,232	30
H01058025*	25	- 16	1"	Multifit	M00130-16	External Skive	37,0	1,46	38,6	1,520	36
H01058031*	31	- 20	1.1/4"	Multifit	M00110-20	External Skive	42,0	1,65	47,5	1,870	45
H01058038*	38	- 24	1.1/2"	Multifit	M00110-24	External Skive	56,0	2,20	53,0	2,087	51
H01058051*	51	- 32	2"	Multifit	M00110-32	External Skive	56,0	2,20	66,0	2,598	62
H01058063*	63	- 40	2.1/2"	Multifit	M03400-40	External Skive	60,0	2,36	78,5	3,091	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01058006*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H01058031*	31	- 20	1.1/4"		OPK-20	No Skive	49,8	1,961	48
H01058038*	38	- 24	1.1/2"		OPK-24	No Skive	57,2	2,252	54
H01058051*	51	- 32	2"		OPK-32	No Skive	71,7	2,823	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## EQUATOR/1 (BLUE)

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01059006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,3	0,642	15
H01059008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,2	0,677	15
H01059010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,6	0,772	18
H01059012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,5	0,886	21
H01059016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	27,3	1,075	24
H01059019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,3	1,232	30
H01059025*	25	- 16	1"	Multifit	M00130-16	External Skive	37,0	1,46	38,6	1,520	36
H01059032*	31	- 20	1.1/4"	Multifit	M00110-20	External Skive	42,0	1,65	47,5	1,870	45
H01059038*	38	- 24	1.1/2"	Multifit	M00110-24	External Skive	56,0	2,20	53,0	2,087	51
H01059051*	51	- 32	2"	Multifit	M00110-32	External Skive	56,0	2,20	66,0	2,598	62
H01059063*	63	- 40	2.1/2"	Multifit	M03400-40	External Skive	60,0	2,36	78,5	3,091	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01059006*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H01059032*	31	- 20	1.1/4"		OPK-20	No Skive	49,8	1,961	48
H01059038*	38	- 24	1.1/2"		OPK-24	No Skive	57,2	2,252	54
H01059051*	51	- 32	2"		OPK-32	No Skive	71,7	2,823	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## EQUATOR/2 (BLACK)

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01060006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01060008*	8	- 5	5/16"	Multifit	M00910-05	External Skive	23,0	0,91	21,0	0,827	18
H01060010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01060012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24
H01060016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	28,7	1,130	27
H01060019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,4	1,315	33
H01060025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H01060031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	51,0	2,008	48
H01060038*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	58,0	2,28	58,1	2,287	57
H01060051*	51	- 32	2"	Multifit	M00910-32	External Skive	59,0	2,32	71,6	2,819	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01060006*	6	- 4	1/4"		OPF-04	No Skive	18,8	0,740	18
H01060038*	38	- 24	1.1/2"		OPK-24	No Skive	59,9	2,358	57
H01060051*	51	- 32	2"		OPK-32	No Skive	73,6	2,898	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## EQUATOR/2 (BLUE)

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01061006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01061008*	8	- 5	5/16"	Multifit	M00910-05	External Skive	23,0	0,91	21,0	0,827	18
H01061010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01061012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24
H01061016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	28,7	1,130	27
H01061019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,4	1,315	33
H01061025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H01061032*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	51,0	2,008	48
H01061040*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	58,0	2,28	58,1	2,287	57
H01061051*	51	- 32	2"	Multifit	M00910-32	External Skive	59,0	2,32	71,6	2,819	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01061006*	6	- 4	1/4"		OPF-04	No Skive	18,8	0,740	18
H01061040*	38	- 24	1.1/2"		OPK-24	No Skive	59,9	2,358	57
H01061051*	51	- 32	2"		OPK-32	No Skive	73,6	2,898	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# INFINITY

## CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01164006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,7	0,657	15
H01164008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01164010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,4	0,803	18
H01164012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01164016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,5	1,122	27
H01164019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	32,6	1,283	30
H01164025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	39,2	1,543	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## DIAMONDSPIR

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10018019*	19	- 12	3/4"	Interlock-Plus	M01850-12	Double Skive	13,0	0,51	39,0	1,54	39,1	1,539	36
H10018025*	25	- 16	1"	Interlock-Plus	M01850-16	Double Skive	15,0	0,59	51,0	2,01	48,5	1,909	48
H10018032*	31	- 20	1.1/4"	Interlock-Plus	M01850-20	Double Skive	22,0	0,87	71,0	2,80	58,3	2,295	57
H10018038*	38	- 24	1.1/2"	Interlock-Super	M02700-24	Double Skive	26,0	1,02	82,0	3,23	66,5	2,618	66
H10018051*	51	- 32	2"	Interlock-Super	M02700-32	Double Skive	30,0	1,18	92,0	3,62	79,6	3,134	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**REMARK:**

DN51 and DN38 references must be crimped with one of the following machines:

- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

DN51 & DN38 require the usage of a special die set with increased length (code: ESA3540N135-76 & ESA3440NL125D066L4) and please verify the pins codes when ordering this special die set according to machine model.

## SYNERGY

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H10137006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,9	0,705	15
H10137010*	10	- 6	3/8"	Multifit	M03500-06	No Skive	0,0	0,00	23,2	0,913	21
H10137019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	0,0	0,00	36,7	1,445	36
H10137025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	0,0	0,00	44,4	1,748	42
H10137031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	0,0	0,00	52,8	2,079	51

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H10137010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	21,8	0,858	21
H10137019*	19	- 12	3/4"	Multifit	M00920-12GX	External Skive	32,0	1,26	34,0	1,339	33
H10137025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H10137031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	49,7	1,957	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## XTRAFLOW/2WB

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01129063*	63	- 40	2.1/2"	Spiralfit	M05400-40	No Skive	86,6	3,409	86
H01129076*	76	- 48	3"	Spiralfit	M05400-48	No Skive	99,7	3,925	95
H01129089*	89	- 56	3.1/2"	Spiralfit	M05400-56	No Skive	114,9	4,524	112

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## XTRAFLOW/4WS

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10091063*	63	- 40	2.1/2"	Spiralfit	M05400-40	No Skive	87,6	3,449	86
H10091076*	76	- 48	3"	Spiralfit	M05400-48	No Skive	98,2	3,866	95
H10091089*	89	- 56	3.1/2"	Spiralfit	M05400-56	No Skive	116,0	4,567	112
H10091102*	102	- 64	4"	Spiralfit	M05400-64	No Skive	131,1	5,161	130

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10091063*	63	- 40	2.1/2"	Interlock-Plus	M01500-40	Double Skive	32,0	1,26	101,0	3,98	86,6	3,409	86
H10091076*	76	- 48	3"	Interlock-Plus	M01500-48	Double Skive	33,0	1,30	100,0	3,94	97,0	3,819	95

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## XTRAFLOW/HT

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01128063*	63	- 40	2.1/2"	Multifit	M03400-40	No Skive	81,2	3,197	76
H01128076*	76	- 48	3"	Multifit	M03400-48	No Skive	95,4	3,756	95
H01128089*	89	- 56	3.1/2"	Multifit	M03400-56	No Skive	113,4	4,465	112

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

**REMARK:**

DN89 - Crimping diameter valid only for M03400-56 and Multifit insert type release 01 and following

## XTRAFLOW/HTEX

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01161063*	63	- 40	2.1/2"	Multifit	M03400-40	No Skive	79,0	3,110	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SPIRTEX/HT

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H80003019*	19	- 12	3/4"	Multifit	M00321-12	No Skive	32,0	1,260	30
H80003025*	25	- 16	1"	Multifit	M00930-16	No Skive	41,7	1,642	39
H80003031*	31	- 20	1.1/4"	Multifit	M00920-20	No Skive	49,3	1,941	48
H80003038*	38	- 24	1.1/2"	Multifit	M00910-24	No Skive	57,5	2,264	57
H80003051*	51	- 32	2"	Multifit	M00910-32	No Skive	71,5	2,815	70
H80003063*	63	- 40	2.1/2"	Multifit	M03400-40	No Skive	79,7	3,138	76
H80003076*	76	- 48	3"	Multifit	M03400-48	No Skive	94,7	3,728	90
H80003089*	89	- 56	3.1/2"	Multifit	M03400-56	No Skive	113,0	4,449	112
H80003102*	102	- 64	4"	Multifit	M03400-64	No Skive	124,5	4,902	122

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## PUSHFIT

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type
	DN	Dash	Inch			
H09066006*	6	- 4	1/4"	Push-lock	NA	No Crimp
H09066008*	8	- 5	5/16"	Push-lock	NA	No Crimp
H09066010*	10	- 6	3/8"	Push-lock	NA	No Crimp
H09066012*	12	- 8	1/2"	Push-lock	NA	No Crimp
H09066016*	16	- 10	5/8"	Push-lock	NA	No Crimp
H09066019*	19	- 12	3/4"	Push-lock	NA	No Crimp
H09066025*	25	- 16	1"	Push-lock	NA	No Crimp

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## FOREMASTER/21

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01166A06*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	15,8	0,622	15
H01166A08*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	16,5	0,650	15
H01166A10*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	19,8	0,780	18
H01166A12*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	22,6	0,890	21
H01166A16*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,1	1,106	27
H01166A19*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,6	1,244	30
H01166A25*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01166A06*	6	- 4	1/4"		OPF-04	No Skive	16,9	0,665	15
H01166A08*	8	- 5	5/16"		OPF-05	No Skive	17,9	0,705	15
H01166A10*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18
H01166A12*	12	- 8	1/2"		OPF-08	No Skive	22,8	0,898	21
H01166A16*	16	- 10	5/8"		OPF-10	No Skive	27,0	1,063	24
H01166A19*	19	- 12	3/4"		OPF-12	No Skive	30,8	1,213	30
H01166A25*	25	- 16	1"		OPF-16	No Skive	38,7	1,524	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## FOREMASTER/21

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01166A06*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H01166A08*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H01166A10*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18
H01166A12*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,1	0,909	21
H01166A16*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,3	1,075	24
H01166A19*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,2	1,228	30
H01166A25*	25	- 16	1"	Multifit	M03400-16	No Skive	39,1	1,539	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01166A10*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,2	0,795	18
H01166A12*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,1	0,909	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## FOREMASTER/28

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01167A06*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,6	0,654	15
H01167A08*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01167A10*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,4	0,803	18
H01167A12*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01167A16*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,5	1,122	27
H01167A19*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	32,6	1,283	30

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01167A06*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01167A08*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01167A10*	10	- 6	3/8"		OPF-06	No Skive	20,8	0,819	18
H01167A12*	12	- 8	1/2"		OPF-08	No Skive	23,5	0,925	21
H01167A16*	16	- 10	5/8"		OPF-10	No Skive	27,9	1,098	27
H01167A19*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## FOREMASTER/28

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01167A06*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,9	0,665	15
H01167A08*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,6	0,732	18
H01167A10*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,7	0,815	18
H01167A12*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21
H01167A16*	16	- 10	5/8"	Multifit	M03400-10	No Skive	28,2	1,110	27
H01167A19*	19	- 12	3/4"	Multifit	M03400-12	No Skive	32,4	1,276	30

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01167A06*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,1	0,713	15
H01167A08*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H01167A10*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,7	0,815	18
H01167A12*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21
H01167A16*	16	- 10	5/8"		OPK-10	No Skive	29,8	1,173	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## FOREMASTER/35

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10133016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	0,0	0,00	33,0	1,30	28,6	1,126	27
H10133019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,0	1,339	33
H10133025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,1	1,618	39
H10133031*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	48,9	1,925	48
H10133038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,2	2,370	57
H10133051*	51	- 32	2"	Interlock-Plus	M01800-32	Double Skive	29,0	1,14	84,0	3,31	75,1	2,957	73

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10133019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,6	1,441	36
H10133025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,3	1,744	42

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# FOREMASTER/42

**CRIMP VERSION: Standard 1**

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10134019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,1	1,343	33
H10134025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,3	1,626	39
H10134031*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	49,5	1,949	48
H10134038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,6	2,386	57
H10134051*	51	- 32	2"	Interlock-Super	M02700-32	Double Skive	30,0	1,18	92,0	3,62	80,0	3,150	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**REMARK:**

DN51: this reference must be crimped with one of the following machines:

- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

using a special die set n°76 with length 135mm (code: ESA3540N135-76 ).

Please verify the pins codes when ordering this special die set according to machine model.

## CRYOFLEX/21

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01158016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,1	1,106	27
H01158019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,6	1,244	30
H01158025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01158016*	16	- 10	5/8"		OPF-10	No Skive	27,0	1,063	24
H01158019*	19	- 12	3/4"		OPF-12	No Skive	30,8	1,213	30
H01158025*	25	- 16	1"		OPF-16	No Skive	38,7	1,524	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRYOFLEX/21

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01158016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,3	1,075	24
H01158019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,2	1,228	30
H01158025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,1	1,539	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## CRYOFLEX/35

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
	H01159006*	6	- 4				1/4"	Multifit	M00120-04	External Skive	0,0	0,00	
H01159008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	0,0	0,00	23,0	0,91	17,8	0,701	15
H01159010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	0,0	0,00	23,0	0,91	20,4	0,803	18
H01159012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	0,0	0,00	26,0	1,02	23,6	0,929	21
H01159019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,0	1,339	33
H01159025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,1	1,618	39
H01159031*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	48,9	1,925	48

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
	H01159006*	6	- 4				1/4"		
H01159008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01159010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H01159012*	12	- 8	1/2"		OPF-08	No Skive	23,5	0,925	21
H01159019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,2	1,425	33
H01159025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	43,9	1,728	42
H01159031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	51,8	2,039	51

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRYOFLEX/35

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01159006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,2	0,717	15
H01159008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H01159010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01159012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRYOFLEX/42

### CRIMP VERSION: Standard 1

Release number: 3.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10123019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,1	1,343	33
H10123025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,3	1,626	39
H10123031*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	52,7	2,075	51
H10123051*	51	- 32	2"	Interlock-Super	M02700-32	Double Skive	30,0	1,18	92,0	3,62	80,0	3,150	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**REMARK:**

DN51: this reference must be crimped with one of the following machines:

- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

using a special die set n°76 with length 135mm (code: ESA3540N135-76).

Please verify the pins codes when ordering this special die set according to machine model.

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10123019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	37,0	1,457	36
H10123025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,1	1,736	42

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

# ANACONDA

## CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10132019*	19	- 12	3/4"	Interlock-Plus	M01500-12	Double Skive	13,0	0,51	38,0	1,50	34,1	1,343	33
H10132025*	25	- 16	1"	Interlock-Plus	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,3	1,626	39
H10132031*	31	- 20	1.1/4"	Interlock-Plus	M01500-20	Double Skive	22,0	0,87	67,0	2,64	49,5	1,949	48
H10132038*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	25,0	0,98	77,0	3,03	60,0	2,362	57

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H10132019*	19	- 12	3/4"	Spiralfit	M05400-12	No Skive	36,4	1,433	36
H10132025*	25	- 16	1"	Spiralfit	M05400-16	No Skive	44,1	1,736	42
H10132031*	31	- 20	1.1/4"	Spiralfit	M05400-20	No Skive	51,7	2,035	51

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## HERCULES/HT

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10125031*	31	- 20	1.1/4"	Interlock-Plus	M01850-20	Double Skive	22,0	0,87	71,0	2,80	58,3	2,295	57
H10125038*	38	- 24	1.1/2"	Interlock-Super	M02700-24	Double Skive	26,0	1,02	82,0	3,23	66,5	2,618	66
H10125051*	51	- 32	2"	Interlock-Super	M02700-32	Double Skive	30,0	1,18	92,0	3,62	80,0	3,150	76

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inchesCrimping diameter tolerance:  $0$  /  $-0.2$  mm ( $0$  /  $-0.008$  inch)**REMARK:**

DN51 and DN38 references must be crimped with one of the following machines:

- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

DN51 & DN38 require the usage of a special die set with increased length (code: ESA3540N135-76 & ESA3440NL125D066L4) and please verify the pins codes when ordering this special die set according to machine model.

HEAT-SHRINKABLE SLEEVE length around  $15 (\pm 1)$  cm positioned half length on the ferrule and half on the hose side.

# HYDROROPE

**CRIMP VERSION: Standard 1**

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10136031*	31	- 20	1.1/4"	Interlock-Plus	M01600-20	Double Skive	22,0	0,87	67,0	2,64	52,9	2,083	51
H10136A38*	38	- 24	1.1/2"	Interlock-Plus	M01600-24	Double Skive	26,0	1,02	77,0	3,03	60,0	2,362	57
H10136038*	38	- 24	1.1/2"	Interlock-Super	M02700-24	Double Skive	26,0	1,02	82,0	3,23	66,2	2,606	62

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

**REMARK:**

H10136038\* must be crimped with one of the following machines:

- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

H10136038\* requires the usage of a special die set with increased length (code: ESA3440NL125D062L4) and please verify the pins codes when ordering this special die set according to machine model.

## DIAMONDSPIR/62

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
	H10118031*	31	- 20				1.1/4"	Interlock-Plus	M01900-20	Double Skive	22,0	0,87	
H10118038*	38	- 24	1.1/2"	Interlock-Super	M02900-24	Double Skive	26,0	1,02	82,0	3,23	71,4	2,811	70

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$ Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$ **REMARK:**

This references must be crimped with one of the following machines:

- MB350 (only for DN31)
- MS400
- MS480
- MS800
- GOLDENCRIMP420
- GOLDENCRIMP450

## SAFEMASTER/2SC

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01162006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	17,0	0,669	15
H01162008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	18,6	0,732	18
H01162010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,5	0,807	18
H01162012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,5	0,925	21
H01162016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	27,4	1,079	27
H01162019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,1	1,224	30
H01162025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,4	1,551	39

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01162006*	6	- 4	1/4"		OPF-04	No Skive	17,7	0,697	15
H01162008*	8	- 5	5/16"		OPF-05	No Skive	18,5	0,728	18
H01162010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H01162012*	12	- 8	1/2"		OPF-08	No Skive	23,5	0,925	21
H01162016*	16	- 10	5/8"		OPF-10	No Skive	26,8	1,055	24
H01162019*	19	- 12	3/4"		OPF-12	No Skive	30,7	1,209	30
H01162025*	25	- 16	1"		OPF-16	No Skive	38,7	1,524	36

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SAFEMASTER/2SC

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01162006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,5	0,650	15
H01162008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01162010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,2	0,795	18
H01162012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,6	0,929	21
H01162016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	27,8	1,094	27
H01162019*	19	- 12	3/4"	Multifit	M00120-12	External Skive	32,0	1,26	31,5	1,240	30
H01162025*	25	- 16	1"	Multifit	M00130-16	External Skive	36,0	1,42	38,6	1,520	36

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Alternative 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01162006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,2	0,717	15
H01162008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,0	0,748	18
H01162010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01162012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SAFEMASTER/2SN

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01165006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,6	0,732	18
H01165008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,7	0,776	18
H01165010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	21,4	0,843	21
H01165012*	12	- 8	1/2"	Multifit	M03450-08	No Skive	25,0	0,984	24
H01165016*	16	- 10	5/8"	Multifit	M03400-10	No Skive	28,1	1,106	27
H01165019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	31,9	1,256	30
H01165025*	25	- 16	1"	Multifit	M03400-16	No Skive	40,0	1,575	39
H01165031*	31	- 20	1.1/4"	Multifit	M03400-20	No Skive	50,7	1,996	48
H01165038*	38	- 24	1.1/2"	Multifit	M03400-24	No Skive	59,6	2,346	57

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01165006*	6	- 4	1/4"		OPF-04	No Skive	18,8	0,740	18
H01165008*	8	- 5	5/16"		OPF-05	No Skive	19,7	0,776	18
H01165010*	10	- 6	3/8"		OPK-06	No Skive	23,5	0,925	21
H01165012*	12	- 8	1/2"		OPK-08	No Skive	27,1	1,067	24
H01165016*	16	- 10	5/8"		OPK-10	No Skive	30,1	1,185	27
H01165019*	19	- 12	3/4"		OPK-12	No Skive	34,9	1,374	33
H01165025*	25	- 16	1"		OPK-16	No Skive	43,0	1,693	42
H01165031*	31	- 20	1.1/4"		OPK-20	No Skive	52,7	2,075	51
H01165038*	38	- 24	1.1/2"		OPK-24	No Skive	59,8	2,354	57

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## SAFEMASTER/2SN

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01165006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01165008*	8	- 5	5/16"	Multifit	M00910-05	External Skive	23,0	0,91	21,0	0,827	18
H01165010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01165012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24
H01165016*	16	- 10	5/8"	Multifit	M00910-10	External Skive	33,0	1,30	28,7	1,130	27
H01165019*	19	- 12	3/4"	Multifit	M00920-12	External Skive	32,0	1,26	33,4	1,315	33
H01165025*	25	- 16	1"	Multifit	M00930-16	External Skive	42,0	1,65	41,5	1,634	39
H01165031*	31	- 20	1.1/4"	Multifit	M00920-20	External Skive	48,0	1,89	51,0	2,008	48
H01165038*	38	- 24	1.1/2"	Multifit	M00910-24	External Skive	58,0	2,28	58,1	2,287	57

• It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".  
 The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies". For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$ Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## T°REX

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01127031*	31	- 20	1.1/4"	Multifit	M00110-20TX	No Skive	46,0	1,811	45

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## TWINPOWER 4000

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01119010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,4	0,803	18
H01119012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## TWINPOWER 5000

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01120008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,8	0,701	15
H01120010*	10	- 6	3/8"	Multifit	M00120-06	External Skive	23,0	0,91	20,2	0,795	18
H01120012*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## TWINPOWER/PLUS

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01112A12*	12	- 8	1/2"	Multifit	M00120-08	External Skive	26,0	1,02	23,5	0,925	21
H01112016*	16	- 10	5/8"	Multifit	M00120-10	External Skive	30,0	1,18	28,5	1,122	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 / -0.2 mm (0 / -0.008 inch)

## FIREND

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01124006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	17,9	0,705	15
H01124010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01124012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21
H01124019*	19	- 12	3/4"	Multifit	M03400-12	No Skive	30,9	1,217	30
H01124025*	25	- 16	1"	Multifit	M03400-16	No Skive	39,2	1,543	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01124006*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H01124010*	10	- 6	3/8"		OPF-06	No Skive	20,6	0,811	18
H01124012*	12	- 8	1/2"		OPF-08	No Skive	22,8	0,898	21
H01124019*	19	- 12	3/4"		OPF-12	No Skive	30,6	1,205	30
H01124025*	25	- 16	1"		OPF-16	No Skive	39,0	1,535	36

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## LUBEMASTER

### CRIMP VERSION: Standard 1

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01135006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H01135010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01135006*	6	- 4	1/4"		OPF-04	No Skive	17,2	0,677	15
H01135010*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## LUBEMASTER

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01135010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,2	0,795	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## JACKMASTER/70

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01168006*	6	- 4	1/4"	Multifit	M00910-04	External Skive	25,0	0,98	17,5	0,689	15
H01168010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,5	0,886	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01168006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,6	0,732	18
H01168010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	21,0	0,827	20

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches

Crimping diameter tolerance: 0 /-0.2mm (0 /-0.008 inch)

## GOLDENMINE

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10116063*	63	- 40	2.1/2"	Interlock-Plus	M01810-40	Double Skive	32,0	1,26	101,0	3,98	90,5	3,563	86

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## K-JET (BLACK)

### CRIMP VERSION: Standard 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02003006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H02003008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H02003010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18
H02003012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,0	0,906	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02003006*	6	- 4	1/4"		OPF-04	No Skive	16,9	0,665	15
H02003010*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## K-JET (BLACK)

### CRIMP VERSION: Alternative 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02003010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	19,8	0,780	18
H02003012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	22,6	0,890	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## K-JET (BLUE)

### CRIMP VERSION: Standard 1

Release number: 4.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02008006*	6	- 4	1/4"	Multifit	M03300-04	No Skive	16,5	0,650	15
H02008008*	8	- 5	5/16"	Multifit	M03300-05	No Skive	17,6	0,693	15
H02008010*	10	- 6	3/8"	Multifit	M03300-06	No Skive	20,2	0,795	18
H02008012*	12	- 8	1/2"	Multifit	M03300-08	No Skive	23,0	0,906	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02008006*	6	- 4	1/4"		OPF-04	No Skive	16,9	0,665	15
H02008010*	10	- 6	3/8"		OPF-06	No Skive	20,4	0,803	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## K-JET (BLUE)

### CRIMP VERSION: Alternative 2

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02008010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	19,8	0,780	18
H02008012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	22,6	0,890	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SUPERJET (BLACK)

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02001006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	17,9	0,705	15
H02001008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	18,7	0,736	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02001006*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H02001008*	8	- 5	5/16"		OPF-05	No Skive	18,4	0,724	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SUPERJET (BLACK)

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H02001006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,3	0,642	15
H02001008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,4	0,685	15

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SUPERJET (BLUE)

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02002006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	17,9	0,705	15
H02002008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	18,7	0,736	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H02002006*	6	- 4	1/4"		OPF-04	No Skive	17,8	0,701	15
H02002008*	8	- 5	5/16"		OPF-05	No Skive	18,4	0,724	18

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## SUPERJET (BLUE)

### CRIMP VERSION: Alternative 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H02002006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,3	0,642	15
H02002008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,4	0,685	15

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SUPERJET/PLUS (BLACK)

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01A78006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,8	0,740	18
H01A78008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,7	0,776	18
H01A78010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01A78012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5$  mm /  $\pm 0.02$  inches

Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## SUPERJET/PLUS (BLUE)

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01A79006*	6	- 4	1/4"	Multifit	M03400-04	No Skive	18,8	0,740	18
H01A79008*	8	- 5	5/16"	Multifit	M03400-05	No Skive	19,7	0,776	18
H01A79010*	10	- 6	3/8"	Multifit	M03400-06	No Skive	20,6	0,811	18
H01A79012*	12	- 8	1/2"	Multifit	M03400-08	No Skive	23,5	0,925	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## PROJET (BLACK)

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
	H01A94006*	6	- 4				1/4"	Multifit	M00120-04	External Skive	
H01A94008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,6	0,693	15
H01A94010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01A94012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## PROJET (BLUE)

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	
H01A95006*	6	- 4	1/4"	Multifit	M00120-04	External Skive	23,0	0,91	16,5	0,650	15
H01A95008*	8	- 5	5/16"	Multifit	M00120-05	External Skive	23,0	0,91	17,6	0,693	15
H01A95010*	10	- 6	3/8"	Multifit	M00910-06	External Skive	27,0	1,06	22,0	0,866	21
H01A95012*	12	- 8	1/2"	Multifit	M00910-08	External Skive	28,0	1,10	25,5	1,004	24

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 \text{ } / -0.2 \text{ mm} (0 \text{ } / -0.008 \text{ inch})$

## GOLDENBLAST

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10072010*	10	- 6	3/8"	Blastlock	M01700-06	Double Skive	15,0	0,59	47,0	1,85	24,4	0,961	24
H10072A12*	12	- 8	1/2"	Blastlock	M01700-08	Double Skive	16,0	0,63	52,0	2,05	28,4	1,118	27

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENBLAST/PLUS

**CRIMP VERSION: Standard 1**

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10066010*	10	- 6	3/8"	Blastlock	M01700-06	Double Skive	15,0	0,59	47,0	1,85	24,6	0,969	24
H10066A12*	12	- 8	1/2"	Blastlock	M01700-08	Double Skive	16,0	0,63	52,0	2,05	29,1	1,146	27
H10066019*	19	- 12	3/4"	Blastlock	M01700-12	Double Skive	19,0	0,75	54,0	2,13	38,9	1,531	36
H10066025*	25	- 16	1"	Blastlock	M01500-16	Double Skive	15,0	0,59	49,0	1,93	41,5	1,634	39

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance: ± 0.5 mm / ± 0.02 inches  
 Crimping diameter tolerance: 0 /-0.2 mm (0 /-0.008 inch)

## GOLDENBLAST/SIX

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Internal Skive Length		External Skive Length		Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	mm	inch	mm	inch	
H10067012*	12	- 8	1/2"	Blastlock	M01800-08	Double Skive	16,0	0,63	52,0	2,05	33,3	1,311	30
H10067019*	19	- 12	3/4"	Blastlock	M01800-12	Double Skive	19,0	0,75	54,0	2,13	42,7	1,681	42

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Skive length tolerance:  $\pm 0.5 \text{ mm} / \pm 0.02 \text{ inches}$   
 Crimping diameter tolerance:  $0 / -0.2 \text{ mm} (0 / -0.008 \text{ inch})$

## REFRIMASTER PLUS

**CRIMP VERSION: Standard 1**

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H09071008*	8	- 6	5/16"	Frigoclic	C00700-06	Crimped	16,9	0,665	15
H09071010*	10	- 8	13/32"	Frigoclic	C00700-08	Crimped	19,9	0,783	18
H09071013*	13	- 10	1/2"	Frigoclic	C00750-10	Crimped	23,2	0,913	21
H09071016*	16	- 12	5/8"	Frigoclic	C00750-12	Crimped	27,1	1,067	24
H09071022*	22	- 16	7/8"	Frigoclic	C00750-16	Crimped	35,2	1,386	33

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
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- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Crimping diameter tolerance:  $\pm 0.1\text{mm}/\pm 0.004\text{ inch}$ **CRIMP VERSION: Standard 2**

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type
	DN	Dash	Inch			
H09071008*	8	- 6	5/16"	Frigoclic	C01000-06	Clamp Style
H09071010*	10	- 8	13/32"	Frigoclic	C01000-08	Clamp Style
H09071013*	13	- 10	1/2"	Frigoclic	C01050-10	Clamp Style
H09071016*	16	- 12	5/8"	Frigoclic	C01050-12	Clamp Style

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

## REFRISTAR

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01138005*	5	- 4	3/16"	Star-Crimp	C00300-04	Crimped	15,6	0,614	15
H01138008*	8	- 6	5/16"	Star-Crimp	C00300-06	Crimped	20,2	0,795	18
H01138010*	10	- 8	13/32"	Star-Crimp	C00300-08	Crimped	21,3	0,839	18
H01138012*	13	- 10	1/2"	Star-Crimp	C00300-10	Crimped	26,0	1,024	24
H01138016*	16	- 12	5/8"	Star-Crimp	C00300-12	Crimped	30,8	1,213	30
H01138022*	22	- 16	7/8"	Star-Crimp	C00300-16	Crimped	34,4	1,354	33
H01138028*	28	- 20	1.1/8"	Star-Crimp	C00300-20	Crimped	42,5	1,673	42

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Crimping diameter tolerance:  $\pm 0.1\text{mm} \pm 0.004\text{ inch}$ 

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type
	DN	Dash	Inch			
H01138005*	5	- 4	3/16"	Star-Fit	K00400-04	Reusable
H01138008*	8	- 6	5/16"	Star-Fit	K00400-06	Reusable
H01138010*	10	- 8	13/32"	Star-Fit	K00400-08	Reusable
H01138012*	13	- 10	1/2"	Star-Fit	K00400-10	Reusable
H01138016*	16	- 12	5/8"	Star-Fit	K00400-12	Reusable
H01138022*	22	- 16	7/8"	Star-Fit	K00400-16	Reusable
H01138028*	28	- 20	1.1/8"	Star-Fit	K00400-20	Reusable
H01138035*	35	- 24	1.3/8"	Star-Fit	K00400-24	Reusable

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
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## REFRIFAST

**CRIMP VERSION: Standard 1**

Release number: 2.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H09068008*	8	- 6	5/16"	Fast-Crimp	OPC-06	Bubble Crimp	14,8	0,583	14
H09068010*	10	- 8	13/32"	Fast-Crimp	OPC-08	Bubble Crimp	16,6	0,654	14
H09068012*	13	- 10	1/2"	Fast-Crimp	OPC-10	Bubble Crimp	18,8	0,740	18
H09068016*	16	- 12	5/8"	Fast-Crimp	OPC-12	Bubble Crimp	21,1	0,831	21

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
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Crimping diameter tolerance:  $\pm 0.1\text{mm}/\pm 0.004\text{ inch}$

## ULTRASTAR

### CRIMP VERSION: Standard 1

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type	Crimp. Diam.		DIE N.
	DN	Dash	Inch				mm	inch	
H01133005*	5	- 4	3/16"	Star-Crimp	C00300-04	Crimped	15,6	0,614	15
H01133008*	8	- 6	5/16"	Star-Crimp	C00300-06	Crimped	20,2	0,795	18
H01133010*	10	- 8	13/32"	Star-Crimp	C00300-08	Crimped	21,3	0,839	18
H01133012*	12	- 10	1/2"	Star-Crimp	C00300-10	Crimped	26,0	1,024	24
H01133016*	16	- 12	5/8"	Star-Crimp	C00300-12	Crimped	30,8	1,213	30
H01133022*	22	- 16	7/8"	Star-Crimp	C00300-16	Crimped	34,4	1,354	33
H01133028*	28	- 20	1.1/8"	Star-Crimp	C00300-20	Crimped	42,5	1,673	42

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
- For optimum performance use the recommended machines and tools of the Manuli Hydraulics integrated catalogue.

Crimping diameter tolerance:  $\pm 0.1\text{mm}/\pm 0.004\text{ inch}$ 

### CRIMP VERSION: Standard 2

Release number: 1.0

PART. NO.	HOSE SIZE			Insert Type	Ferrule	Crimping Type
	DN	Dash	Inch			
H01133005*	5	- 4	3/16"	Star-Fit	K00400-04	Reusable
H01133008*	8	- 6	5/16"	Star-Fit	K00400-06	Reusable
H01133010*	10	- 8	13/32"	Star-Fit	K00400-08	Reusable
H01133012*	12	- 10	1/2"	Star-Fit	K00400-10	Reusable
H01133016*	16	- 12	5/8"	Star-Fit	K00400-12	Reusable
H01133022*	22	- 16	7/8"	Star-Fit	K00400-16	Reusable
H01133028*	28	- 20	1.1/8"	Star-Fit	K00400-20	Reusable
H01133035*	35	- 24	1.3/8"	Star-Fit	K00400-24	Reusable

- It is recommended to follow the instructions and training information present on the Manuli website "Assembling information and instructions".
- The present crimp chart document is related to the Manuli Hydraulics integrated package of hoses, fittings and hose-assembling equipment and is valid under the condition of use of original components from the Manuli Manufacturing Integrated Program, coherently with the recommendations of international norms of the sector, ref. ISO/TR 17165-2 "Recommended practices for hydraulic hose assemblies".
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